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ABSTRACT

This district-wide evaluation study of the Berkeley Unified School District documents, describes, and analyzes several major components of the system as they existed in the 1974-75 academic year. The process study, presented in these two volumes, documents and describes a set of district elements which differ from one another in degree of generality: the district as a whole; four major grade groups; and individual school sites. It also accomodated examination of certain characteristics of the experimental and non-experimental school programs, the early childhood education program, and the adult education program. Specific focus was on the topics of curriculum, instructional methodology, teacher-student-parent attitudes, and staffing patterns. Basic skill curriculums were investigated by interviews and surveys with administrators, evaluator reviews of curriculum, teacher interviews and questionnaires, classroom observation of teachers, and student questionnaires. Instructional methodology was investigated by inquiring about the plans, policies, and administrative input directed toward instructional practices. Attitude assessments were made of parents, teachers, and students. Assessment of staffing patterns required the collection of employment and demographic data. Assessment of the early childhood education program required a survey of program directors and a teacher questionnaire. The adult education program was examined via a survey of key personnel. These procedures produced the body of data which is organized, described, and discussed in this report. (RC)

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BERKELEY UNIFIED SCHOOL DISTRICT

EVALUATION STUDY

FINAL REPORT

VOLUME I

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BERKELEY UNIFIED SCHOOL DISTRICT

EVALUATION STUDY

FINAL REPORT

VOLUME I

September, 1975

BERKELEY UNIFIED SCHOOL DISTRICT
EVALUATION STUDY

FINAL REPORT

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BERKELEY UNIFIED SCHOOL DISTRICT
EVALUATION STUDY
FINAL REPORT

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- Basic Approach
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INTRODUCTION

Study Objectives and Reporting Purposes

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BERKELEY UNIFIED SCHOOL DISTRICT

EVALUATION STUDY

FINAL REPORT

I. INTRODUCTION

The Berkeley Unified School District (B.U.S.D.), as it exists today, is the product of a remarkable and turbulent evolution. From its highly conservative and passive posture in the early 1950's, the district has steadily met a series of difficult and divisive challenges. In meeting these challenges, B.U.S.D. has achieved one of the most educationally innovative and socially responsive educational systems in the nation.

Central to the development of Berkeley's educational philosophies and practices have been the issues of *real* racial and ethnic integration and the provision of a quality education for *all* Berkeley children (Sibley, 1972). The genesis of these themes is to be found in Berkeley's failure in the early 1950's to provide equal educational opportunities to its burgeoning minority population. The increasing numbers of Black residents (4% in 1940, 19.6% in 1960) were forced to send their children to almost completely segregated schools in south and west Berkeley during the elementary and junior highschool years. Less than a dozen Black teachers were employed by the district. The smaller and more stable number of other minority residents (2.2% in 1940, 6.5% in 1960) were similarly unrepresented in the schools at that time. By 1953 there were only two Asian teachers (Japanese) with the first Chinese teacher being hired in 1955. These conditions gave rise to the community concern and action which, from that point on, have played such a vigorous role in the debate, formation, and nurturance of B.U.S.D.'s policies and practices.

B.U.S.D.'s efforts to improve the educational opportunities offered to all Berkeley children may have begun in the late 1950's with the Staats Committee. The committee prepared an in-depth report on interracial conditions in the community and schools and recommended minority hiring. In 1963 the Hadsell Committee investigated the extent of segregation in Berkeley schools and its relation to motivation, achievement, and delinquency. The Hadsell report and the alternate options of the Ramsey plan formed the basis of Berkeley's eventual integration of secondary schools, with the former also addressing the ills visited upon minority children by a stringent tracking system. The Board of Education's acceptance of these plans divided the community and led to a heated but futile recall election of Board members. Finally in 1968, full integration of the Berkeley schools was achieved when a plan for primary level integration was implemented. The late 1960's were also years in which other major accomplishments occurred including intensified minority hiring, the expansion of Early Education classes, and programs for gifted children.

Following the successful full-scale integration of Berkeley's schools, B.U.S.D.'s attention has increasingly focused on educational strategies per se as a means for making quality education a reality for all Berkeley children. The Experimental School Program is a prominant example of this approach. Debate on the relative effectiveness of a variety of educational philosophies and programs continues to be the order of the day. With an enrollment of approximately 14,000 students in Kindergarten through Twelfth grades, 450 Early Childhood Education enrollees, and several thousand Adult Education students, the resolution of these questions should not be based on intuition alone. The diversity of needs and the complexity of existing and potential programs, curriculums, and techniques demand a critical empirical approach to decision making. Decisions must be founded upon an objective knowledge of each of the major educational policy.

Pacific Consultants has conducted a district-wide evaluation study of B.U.S.D. with the goals of documenting, describing, and analyzing several major components of Berkeley's education system as they existed in the 1974-1975 academic year. The purpose of this effort has been to provide B.U.S.D. and its clients with a body of objective knowledge to aid their decisions regarding future directions. Some of the issues studied still hark back to the racial and ethnic inequalities and conflict which dominated earlier decades. Most issues defy simplification. But in all cases a greater understanding has been attained.

Study Objectives and Reporting Purposes

In January, 1975, Pacific Consultants began work under a contract with the Berkeley Unified School District (B.U.S.D.) to conduct a district wide evaluation study. Through two major research components, a process study and an impact study, each of which had specific research questions and activities, the evaluation study sought to fulfill three primary objectives: 1) to document, describe, and assess the current school system; 2) to determine the effectiveness of the current school system; and 3) to identify effective educational factors. B.U.S.D. requested that four topics be addressed by these objectives: curriculum, instructional methodology, teacher-student-parent attitudes, and staffing patterns.

The process study, which will be presented first, documents and describes curriculum, instructional methodology, teacher-student-parent attitudes, and staffing patterns as required by the first objective of the evaluation study.

Objectives two and three are fulfilled in the impact study. The sections below describe the preparation and relationship of the various parts of the report, the basic research approach, the research methods, the results, and the final conclusions of the B.U.S.D. Evaluation Study as related to the Process Study.

Organization and Preparation of the Report

The final report of the B.U.S.D. Evaluation Study is contained in four interrelated volumes. In Volume I, the methodology for conducting both the process and the impact study is described and the results and interpretations of findings for the attitude component of the process study are presented. In Volume II, the remaining results and interpretations for the curriculum, instructional methodology, and staffing pattern components are presented. In Volume III, the results and interpretations of the impact study, as well as the conclusions and summary for the impact study, are presented. The instruments used in the data collection phase of the study and various supplementary tables and figures appear as appendices in Volume IV.

Because the B.U.S.D. Evaluation Study required extensive research operations to be performed within a short period of time, a management plan was utilized which distributed the research design, interpretation, and reporting across two groups of evaluators: 1) the core evaluation team, and 2) the curriculum task force. The four core staff persons prepared the results for the attitude, instructional methodology, staffing pattern, and impact data. They also reviewed the results obtained and reported by the curriculum task force. The curriculum task force, which contained one of the core staff members, prepared the report sections dealing with elementary reading/language arts and mathematics, and with secondary English/language arts, mathematics, science, and social studies. The entire final report, including portions prepared by the curriculum task force, was edited and revised by the core evaluation team. Nevertheless, the reader will undoubtedly perceive some slight differences between sections in writing style and perhaps in educational perspective.

Basic Approach

- Process Study -- The process study was designed to document and describe a set of Berkeley School District elements which differ from one another in degree of generality: 1) the Berkeley Unified School District as a whole; 2) four major grade groups (i.e., Kindergarten to Third grade; Fourth to Sixth grade; Seventh to Ninth grade; and Tenth to Twelfth grade); and 3) individual school sites. The process study also accommodated an examination of certain characteristics of the Experimental and Non-experimental school programs, the Early Childhood Education Program, and the Adult Education Program. The specific focus of all of the descriptive and documentary efforts in the process study rested upon the four central topics of curriculum, instructional methodology, teacher-student-parent attitudes, and staffing patterns. Thus, four lines of investigation were applied to the school district as a large global entity, as well as to numerous subentities which hold special interest or which have diverse individual identities and properties.

At the outset of the evaluation study it was decided that the smallest unit of analysis would be the individual school site. This decision insured that the end products of the study would provide information and feedback to each individual school in the B.U.S.D. as well as more general information about the entire district. As the actual performance of the evaluation proceeded, it became apparent that a few types of information would be available on grades within particular schools. Because of the presence of Experimental School Programs (ESP's) at many schools and in special off-site schools, each ESP was defined as an individual school site if its size permitted. All off-site ESP programs were defined as school sites. The molar descriptions of the entire school system were derived from these school site and special program analyses.

The desired substance of the B.U.S.D. Evaluation Study was stated by the district in its Request for Proposal (1974). In submitting a proposal for contract award, Pacific Consultants developed a set of research questions which subsequently guided the activities of the evaluation study. Specific information collection and analysis approaches for the process study were devised for each of the four major topics of inquiry.

● ● Curriculum -- In order to investigate curriculum issues, an operational definition was established which focused upon the *basic skill curricula* of the district. The term *basic skill curricula* referred specifically to the processes and contents inherent in reading/language arts and mathematics in Kindergarten to Sixth grades, and English/language arts, mathematics, science, and social studies in

Seventh to Twelfth grades. The *intended* and the *real* basic skill curriculums of B.U.S.D. were investigated via five methods: 1) interviews and surveys with B.U.S.D. central administrators and B.U.S.D. school site administrators; 2) evaluator reviews of prepared district, school site, and program curriculum document and plans; 3) questionnaires and interviews with basic skill teachers at all levels; 4) classroom observations of all basic skill teachers; and 5) student questionnaires. Of particular interest were the curriculum philosophy, the planning and implementation processes which produced curriculum practices, curriculum objectives, scope, content, sequence, articulation between feeder and receiver schools, continuity throughout the educational system, coordination of offerings within the District and within individual schools, and the relevance of curriculum to student needs.

● ● Instructional Methodology -- The documentation and description of instructional methodology required a review of B.U.S.D. information needs in this area. As a result of preliminary discussions with Laval Wilson, Superintendent of B.U.S.D., and brief introductory interviews with a variety of central adminstrators, the term instructional methodology was operationally defined. Accordingly, the study inquired about the plans, policies, and administrative input or assistance directed toward instructional practices. Specific reference was made to procedures which vary in terms of the classroom organization of students, the assignments of teachers, and the utilization of diagnostic-prescriptive techniques. These inquiries were made of central administrators, principals and program directors. In addition, systematic classroom observations were made with all basic skill teachers in order to define the degree to which individualized forms of instruction are in practice in different elements of B.U.S.D.

- Teacher-Student-Parent Attitudes -- The nature of the attitude assessments made in the evaluation study was determined by the Berkeley Board of Education at their meeting on December 11, 1974. Following a discussion of a series of research questions on attitudes and sample sizes. the Board determined that parents and teachers should be surveyed about their respective *expectancies* for the B.U.S.D. In addition to student expectancies for B.U.S.D., the Board also determined that student attitudes toward themselves as learners and toward their instructional setting were to be probed. The attitude data obtained for all three participant groups will be described in the current report.

- **Staffing Patterns** -- The assessment of B.U.S.D. staffing patterns was limited in scope. It required the collection of employment and demographic data for all major personnel categories at both the district and at the school site level. Comparisons were made of adult/student ratios, placement of various personnel categories, Black and Non-Black employment and assignment, and female-male employment and assignment.

- **The Early Childhood Education Program** -- The Early Childhood Education (ECE) programs were studied in an abbreviated manner which involved research questions and methods that differed from those applied to the Kindergarten through Twelfth grade levels. Program directors were surveyed for information on their program's curriculum and instruction goals, staffing, procedures, planning activities, and needs.

ECE teachers responded to a questionnaire which asked about varying program activities and approaches.

- - Adult Education Program -- The Adult Education program was examined via a survey of key personnel. Research inquiries covered program goals, plans, curriculum and instruction policies, future directions, and needs.

- Impact Study -- The basic purpose of the impact study was two-fold: 1) to determine the *effectiveness* of the district, schools, and programs in terms of basic skill achievement; and 2) to determine the *relationship* of specified educational variables (such as instruction, staffing, and school attributes, and of student variables such as age, race, sex, or ability) to basic skill achievement. In this manner, the quantitative dependent variables which measure impact were used in comparisons between levels of specified independent variables (e.g., instruction, staff to student ratio, student characteristics, school program, etc.) to indicate associations with student achievement.

  As with the process study, the basic level of analysis in the impact study was the school site. The achievement of all B.U.S.D. schools and programs was described in terms of reading or English and mathematics. Only the achievement data from elementary students could be related to student and process variables. The inability to analyze the achievement of secondary students in this way was created by the fact that secondary student data cannot be meaningfully linked to a specific set of instructional or classroom variables as could data for the elementary students. Elementary students are typically assigned to a single teacher and self-contained classroom for an entire school year. Even when the class is taught by a team of teachers, the specificity is usually such that some salient features can be linked to the student's involved. In the B.U.S.D. study these features had the added advantage of being linked to the student's record. In contrast, secondary students have numerous different classrooms, teachers, and educational experience and these usually change biannually. Further, these features are not systematically and centrally recorded for secondary students.

Constraints

As with any research, the B.U.S.D. Evaluation Study was performed under conditions defined by certain constraints and impediments. Only some of these restrictions had been anticipated. Although many are interrelated, they appear to fall in five relatively distinct categories.

- Scope and Objectives -- The Evaluation Study was based upon a very broad range of objectives and research questions. Consequently, a massive amount of information was gathered to form the data base of the study. Even so, only data that pertained directly to the purposes of the research questions were collected. Two classical evaluation problems can be traced to these circumstances. First, the total quantity of the data offers almost endless opportunities for detailed analysis or reanalysis. Variables could be regrouped, combined, converted, and subjected to additional tests in a lengthy if not endless manner. However, the objectives of the study, coupled with time and budgetary realities, demand that certain priorities be established and certain limitations be set. To exacerbate the matter, the complexity of educational and policy issues in an urban school district constantly urge that the scope of the study expand to encompass other interesting and timely matters, or to obtain more depth to the answers obtained. The results which follow represent the necessary resolution to these conflicting demands.

- Methodological Issues -- Several phases of the Evaluation Study offered problems of a methodological nature. First, some of the fundamental educational issues involved in the research questions have not been well accommodated technologies. The evaluation of curriculum and teaching methods are prime examples. Curriculum, for instance, is a loosely defined referrent for almost any form of experience or input to which a school child is exposed. Although it usually connotes systematic, content oriented inputs, the variations in its definitions and manifestations are very numerous. To evaluate this construct thoroughly, therefore requires procedures appropriate for assessing a continually operating, infinitely varied process. Educational research is still struggling to define curriculum (Bloom, 1956) and has just initiated some rudimentary discussions of the issues surrounding its evaluation (e.g., Posner & Strike, 1974; Posner, 1974). Thus, the evaluation procedures adopted for the documentation, description, and assessment of the B.U.S.D. basic skill curriculums constitute one of the first operationalized efforts to perform a comprehensive examination of a district - wide curriculum content and planning process.

Although the assessment of teaching methods has received considerably more research attention than curriculum, the findings have not produced clear conclusions regarding the effects or merits of various approaches (Heath & Nielson, 1974). Thus, in the observations of B.U.S.D. instructional methodology, it was not possible to measure that hypothetical property conducive to student learning that educators have strived for so long to uncover. Instead, a particular instructional dimension of interest or promise was operationally defined and subsequently measured, i.e., the individualized versus the traditional approach.

A similar problem exists for the assessment of student attitude and self concept. Although a large body of theory and research has been accumulated on the subject (e.g., Coopersmith, 1967; Wylie, 1961) the instruments used to measure this construct are relatively new. In addition, the need to obtain analogous data from a group of children covering a 12 year age range presents the usual problem of finding a set of items that actually probe the same psychological construct but which are appropriate to the different cognitive and social factors characterizing children of different ages. For example, although the SCAMIN was used because it had analogous test forms for varying age groups, there are instances where some items designed for older students seem too childish. Since this was only a mild problem, it was tolerated. But it does suggest that self concept and motivation findings for the older students should be interpreted with this constraint in mind.

- **Contextual Problems** -- The Evaluation Study encountered several problems related to the spirit of participation and cooperation. The bulk of evaluation data was dependent upon students, parents, teachers, principals, or administrators committing a block of time to the tasks of being interviewed or of writing responses to survey questions. In the case of the teacher survey, the time required was troublesome because, in addition to their normal instructional duties, the teachers had already supplied numerous hours to a variety of other evaluations. In addition, a strike of teacher aides occurred during the data collection phase which seemed to heighten the teacher's reluctance to cooperate fully with yet another study. It is impossible to estimate precisely how much this reluctance affected the validity of the teacher survey results. In the judgement of the evaluators, teacher reluctance usually took the form of refusing to supply answers to the survey rather than in distorting answers given. With few exceptions surveys actually completed reflected thoughtful attempts to supply the requested information.

The problems associated with student data arose primarily at the secondary level. During the administration of the Student Opinion Polls and the SCAMIN, Pacific Consultant observers sometimes experienced class management problems which no doubt prevented the acquisition of complete and valid student data. These problems were usually occasioned by teachers leaving the room during the evaluation procedures or by their failure to exert control. It is not clear, however, what the best course would have been for teachers to follow because when they made efforts to mandate student cooperation, some students responded with increased deference. Secondary students also explained that they had tired of filling out the numerous surveys and test forms used so frequently in previous months and years to guage all manner of student variables. Hindsight suggests that future surveys of secondary students should be conducted in small group settings with a more open-ended interview structure or a combination of interview and closed-ended questionnaire.

The last major methodological problem which must be noted involves the district's pupil evaluation program. The achievement data obtained in this testing program was used by Pacific Consultants as the data base for the impact study. However, the more fundamental purpose governing B.U.S.D. operation of the testing program is to supply teachers with diagnostic information about students which will aid in their educational plans for each student. As a result, the achievement tests are administered by teachers and certain decisions regarding the selection of appropriate levels of tests, test make-ups, etc., are decided on the basis of instructional and classroom priorities instead of research-dominated rationales. Moreover, fiscal considerations prevented the purchase of all new test forms (CTBS-Form S) which would have permitted the administration of a single instrument with comparable tests for all grade levels to all students. The use of a single test would have been desirable from a research point of view but was not necessary from a pupil diagnostic view. Thus, the dual uses of the student achievement data require that certain compromises be accepted. The interpretation of the achievement data in the impact study must be tempered by the knowledge of these trade-offs.

- Inferential Issues -- The contextual and methodological problems discussed above, as well as certain additional conditions, all combine to place constraints on the inferences that can be drawn from the evaluation data. For instance, the reliability of student and teacher data could be better determined had the contextual and methodological problems been absent. Thus, any attempt to draw inferences from these findings must be qualified by a knowledge of the circumstances that surrounded the data collection phase. Closely related is the sampling approach that was used with students. The ideal approach would have been to administer the student instruments to a sizeable random sample of students in each grade at each school or program. Unfortunately, the evaluation objectives and priority demanded a more diminuitive sampling plan. Thus, a cluster-sampling plan was used in which at least one classroom per school was sampled. This approach had the advantage that students did not have to be removed from the classroom for the survey and that a random set of B.U.S.D. *classrooms* would supply data for each grade grouping. The drawbacks were that inferences could not be made for student expectancies and attitudes at particular schools nor for grades within a school. Further, if classrooms were chosen which had been constituted on the basis of special biases (i.e., a pull-out classroom) those biases would be transmitted to the evaluation data in a magnitude greater than would occur under a random sampling plan.

Another precaution for inferences must be attached to conclusions regarding various programs in B.U.S.D. In all instances, the objectives of programs were not evaluated in a comprehensive manner. For example, although numerous assessments were made of the various ESP and Non-ESP programs, no effort was made in this Evaluation Study to evaluate the success of ESP programs in implementing their program objectives. Thus, the data obtained on ESP serves only a descriptive purpose. It provides data which must be interpreted separately for each ESP or Non-ESP school in terms of the unique purposes of each. This is also true of the other special programs in B.U.S.D. Although achievement can be described for programs such as Follow Through and Compensatory Education to the extent that B.U.S.D. can identify the students within these programs, statements inferring the success or relative merits of these programs cannot be made. To do so would require a study of how successfully the processes of each program have complied with the program's stated objectives. These constraints are intensified by the confounding of program effects within B.U.S.D. schools. That is, multiple programs are operated within the same school and even within the same classroom. It is therefore, impossible to unravel the specific effects and benefits of any particular program upon the students enrolled in that school or classroom.

Fundamental limitations must be placed on all of the process or impact data. The research questions underlying this data were posed in very general terms. The data was therefore intended to provide some basic descriptions of four major components of B.U.S.D. These descriptions should probably be viewed as a preliminary organization of evidence. Since several issues revealed in the study are of serious interest to many families and educators, it is likely that additional refinement would now be in order for some descriptions and comparisons. For instance, the finding reported later on parent, student and teacher interest in a safe, secure school environment provides a basic description of one aspect of parent, student, and teacher expectancy. Yet the nature of this description may be of sufficient interest to warrant an additional, more refined examination of underlying circumstances.

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II. METHOD

Pacific Consultants planned and carried out a series of research procedures which moved the evaluation study from a phase characterized by abstract research goals and objectives to the present phase in which research results can be presented.

Participants

The B.U.S.D. Evaluation Study gathered information from several different types of people who participated in the Berkeley public schooling enterprise. Included were students at Kindergarten to Twelfth grade levels, parents, basic skill teachers, central administrators, school principals, and program directors.

- Students -- The direct clients of B.U.S.D., the students, were involved in several phases of the study. For the process study, a sample of Fourth to Twelfth grade students were polled for their opinions about their instructional setting and their expectancies of B.U.S.D. These same students, plus an additional sample of First to Third grade students, were asked about their attitudes toward themselves as learners. The selection of students for these inquiries was governed by the students' classroom assignment. In order to obtain the opinions and

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attitudes of an appropriate sample of elementary and secondary students enrolled in both ESP and Non-ESP classes, classrooms were designated at random at each school and program. At least one classroom was sampled at each school and from each program, and all students assigned to a specified classroom were polled. A more complete description of the sampling plan is provided in a separate section below.

The students who attend B.U.S.D., and who therefore participated in the evaluation study, can be characterized by several different demographic features. Several of these features, such as race and income level, have been documented by school and governmental researchers. In addition, B.U.S.D. systematically collects data on the academic achievement of its students.

In terms of racial identities, the 1974-1975 B.U.S.D. student body was distributed across six categories in the following proportions: American Indian (.1%); Asian (6.0%); Black (43.7%); White (45.3%); Chicano (3.4%); and other (1.5%). In 1964, a racial balance between Black and Non-Black students was created in B.U.S.D. secondary schools, and in 1968 the same was done for B.U.S.D. elementary schools. Thus, it is reasonable to expect that classrooms sampled from any particular B.U.S.D. school will contain a group of students which approximates the racial proportions of the student body in general. Pacific Consultants' sample of First to Twelfth grade students for the attitude assessments was distributed across the racial categories in the following proportions: Asian (8%); Black (39%); White (48%); and other (4%). Because of the very small number of students in the Asian, American Indian, Chicano, and other categories, most comparative analyses were performed on only the two largest student groups; i.e., Black and White.

Direct information on the socioeconomic background of B.U.S.D. students is unavailable. However, a general understanding of the socioeconomic context from which they are derived can be obtained by examining 1970 data on the City of Berkeley from the U.S. Bureau of the Census. In 1970 the median annual income of Berkeley residents was $9,987. This was approximately $2,000 less than the median annual incomes of the county as a whole or the surrounding Bay Area community. Approximately 25% of B.U.S.D. students were recipients of *Aid to Dependent Children* grants in the 1972 school year. It is generally agreed that the enrollment at each B.U.S.D. school includes children from all of the socioeconomic strata; i.e., it is no longer possible to describe any particular B.U.S.D.

school as "middle class," "low income," etc. Rather, the students who attend B.U.S.D. schools, and thus who participated in the B.U.S.D. study, represent a cross-section of the socioeconomic levels which exist in the City of Berkeley as a whole.

The B.U.S.D. Research Department has reported extensively on the results of achievement tests with B.U.S.D. students (e.g., Dambacher, 1974). The results in reading, language, and arithmetic have been summarized as follows:

> ***Reading***
>
> *In summary, in grades 1 through 11, all but one grade group (7th grade) exceeded the national norm at the median when Total Group scores are examined (Table 23). When the students are subdivided into ethnic groups, all 11 scores of the White students were above the 75th percentile; five of the 11 scores made by Asian students were also above the 75th percentile, and the remaining six scores were well above the norm (50th percentile); two Chicano student scores were above the norm and all but one of their remaining scores were above the 25th percentile; six of the Black student scores were above the 25th percentile but below the national norm, and five of their scores were below the 25th percentile.*
>
> ***Language***
>
> *Grades 4 through 11 were tested in Language, which measures the student's knowledge of such things as punctuation and capitalization, correctness of expression and spelling. In 1973, median scores made by the Total Groups in grades 4-6 and 9-11 were all above the national norm, while scores for 7th and 8th graders fell slightly below the norm (Tables 24-31 and 39). The differential performance of the ethnic subgroups noted in the section on reading scores is repeated on the language tests. Five out of eight of the Black students' scores fell below the 25th percentile, and all of them were below the norm (50th percentile). Their highest scores were made in the lower grades (4-6). One Chicano score (7th grade)*

was below the 25th percentile, five others were above the 25th percentile but below the norm, and two scores (5th and 10th grades) were at the norm. All Asian and White scores were well above the norm, with two White scores and six Asian scores also being at or above the 75th percentile.

Black students made their best scores in the intermediate grades (4-6), while Chicano students tended to do best at the high school level (grades 10 and 11), and Asian and White students maintained consistently high scores across all eight grades.

Math

Table 54 presents a summary of the arithmetic scores made by first through eleventh graders in May 1973. The scores show a consistent pattern of improvement in 1973 over 1972 at all grade levels. There was, nevertheless, a pattern of declining scores as the students passed through the grades. Total Group Median scores for primary students (1-3) ranged from the 69th to the 78th percentile; for intermediate students (4-6) this range dropped to the 62nd through 64th percentile; and for junior high students (7-9) it dropped still lower to the 44th through 49th percentile. (Tenth and eleventh grade scores are not representative of their respective grade groups due to the exemption from testing of all advanced math students).

This pattern of declining scores was also generally evident among all ethnic subgroups of students, although the decline was most noticeable among Black and Chicano students. The high and low scores by subgroups were as follows: White students, first grade high of 93rd percentile, eighth grade low of 75th percentile; Asian students, second grade high of 96th percentile, seventh grade low of 77th percentile; Chicano students, second grade high of 80th percentile, seventh grade low of 17th percentile; Black students, first grade high of 57th percentile, eighth grade low of 11th percentile.

- Parents -- B.U.S.D.'s second line of clients, the parents of students, were surveyed for their expectations and views of the school district. Parents were selected on the basis of their children's enrollment in ESP primary or secondary programs and Non-ESP primary and secondary schools. Surveys were mailed to the parents of a random sample of children who were enrolled in these schools and programs during the 1974-1975 academic year.

Although the race of the participating parents is not known, the self assigned race of each B.U.S.D. student is assigned. It is therefore possible to state which student-race is associated with each participating parent. Relative to the representation of racial groupings within the 1974-1975 student body, the proportion of parents in each student-race category was unbalanced. In particular, the participating parents represent White and Asian groups to a greater extent and Black, Chicano, and American Indian groups to a lesser extent. As cited earlier, the 1974-1975 student body is distributed as follows: American Indian (.1%); Asian (6.0%); Black (43.7%); White (45.3%); Chicano (3.4%); and other (1.5%). In contrast, participating parents were distributed across student-race categories in the following pattern: American Indian (.2%); Asian (9.9%); Black (29.9%); White (55.8%); Chicano (2.4%); and other (1.8%).

The income backgrounds of Berkeley children that were discussed somewhat earlier also apply in a general way to the parents of B.U.S.D. students. However, there are no direct indices of parent income for the B.U.S.D. student body, in general or for the participating parents, in particular. Nevertheless participating parents did provide information on another socioeconomic feature, level of education. Thus, the education of participating parents was distributed as follows: Less than high school attendance (1.3%); high school attendance (2.3%); high school graduation (6.7%); college attendance (18.4%); college graduation and post-graduate education (71.4%). In contrast, the 1970 census figures for Berkeley cited the following education pattern: Less than high school attendance (13%); high school attendance (29%); one to three years of college (18%); four or more years of college attendance (40%). The participating parents have acquired more formal education than the community in general. However, the generality of this statement can only be an assumption if the comparison is applied to the entire B.U.S.D. parent population because no direct evidence is available on the education of B.U.S.D. parents.

- Teachers -- All B.U.S.D. basic skill teachers, as defined above, were included in the survey of expectations and classroom practices, and in the classroom observations. The racial, sex, and tenure characteristics of B.U.S.D. teachers are presented and discussed in the B.U.S.D. staffing pattern analysis below. The distribution of all Certified teachers across racial groups is as follows: American Indian (.2%); Asian (6.7%); Black (27.7%); Caucasian (62.1%); and other (.3%).

- Administrators, Principals, and Program Directors -- In addition to students, parents, and teachers, the evaluation study also directed information probes to central administrators, school principals, and program directors. Central administrative staff who possessed knowledge on subjects related to the research questions were selected for input. Among those involved were: 1) the Superintendent, Laval S. Wilson; 2) the Assistant to the Superintendent, Louis Zlokovich; 3) Assistant Superintendent of Administrative Services, Harold Maves; 4) Assistant Superintendent of Planning and Program Implementation, E. Al Colum; 5) Assistant Superintendent of Curriculum and Instructional Services, Lawrence Wells; 6) Director of Experimental Schools, John Newton; 7) Director of Curriculum Development and Human Relations, Kathryne Favors; 8) Director of Special Educational and Pupil Personnel Services, Barbara Mercer; 9) Project Coordinator of Compensatory Education, George Perry; 10) Project Coordinator of Follow Through, Geraldine Gillian; 11) Project Director of Title III Math, Georgia Strecker; and Project Director of Reading, Russell Saunders. All Non-ESP school principals and all ESP Program Directors were included.

  Seven of the administrators named above (58%) are Black and five (42%) are White. Of the school principals and program directors who were interviewed, 41% were Black and 59% were Non-Black. Of the administrators interviewed, eight (67%) were male and four (33%) were female. Of the principals and program directors interviewed, 22 (76%) were male and 7 (24%) were female. The analysis of staffing patterns presents more detailed demographic data on these individuals (Tables 146-149, Figures 25-27).

Research Questions

Prior to the onset of the B.U.S.D. Evaluation Study, a set of research questions was proposed by Pacific Consultants and negotiated with B.U.S.D. The intent of this process was to develop research questions which were optimally responsive to the scope and objectives of the evaluation study. Because the research questions for the process study have a bearing on some aspects of the impact study and vice versa, the generation of research questions within these two separate studies was closely coordinated.

The formulation of research questions provided the basic structure of the evaluation study. B.U.S.D. stated a need for comprehensive descriptions on the state of the schools of four specified component areas, and the relationship of these factors to student outcome. The research questions which were devised to fill this need also served to define the nature of the data to be gathered and the data collection methods and instruments. Tables 1 through 4 depict the relationship of four sets of process study research questions (i.e., a set for each research topic: curriculum, instructional methodology, attitudes, and staffing patterns) to the data collection instruments of the body. Table 5 lists the research questions for the impact study.

Table 1. Curriculum Research Questions and Data Sources of the Process Study

CURRICULUM	Achievement Tests	Document Review	Administrative Interview	Principal Interview	Teacher Survey Questionnaire	Student Attitude Scale	Student Attitude Survey	Parent Attitude Survey	On-Site Observations
1. What are the philosophical base or goals and the rationale of K-12 basic skills curricula in BUSD?		X	X						
2. What are the philosophical base or goals and the rationale of K-12 basic skills curricula in each school site?		X		X					
3. What are the scope, content, and sequence of K-12 basic skills curricula plans in BUSD?		X	X						
4. Does the actual scope, content, and sequence at each school site differ from the BUSD plans?			X	X	X				
5. What is the planning, coordinating, and dissemination process of curriculum plans?		X	X	X	X				
6. Are the curriculum plans in K-6 basic skill areas and basic skill courses in 7-12 comprehensive?		X	X	X	X				
7. Are the curriculum plans in K-6 and courses in 7-12 designed to optimize achievement?		X	X	X	X				
8. Are the curriculum plans logically sequenced between grades and schools in K-6 and between courses and schools in 7-12:		X	X	X	X				
9. Are the basic skills in K-6 and courses in 7-12 compatibly interrelated?		X	X	X	X				
10. Are the skills in K-6 and courses in 7-12 relevant to student cultural and social backgrounds, and to diverse aspirations?		X	X	X	X				
11. What is the status of grades, schools, types of schools, and the District on specific classroom curriculum strategies?					X				

Table 2. Instructional Methodology Research Questions for the Process Study

INSTRUCTIONAL METHODOLOGY	Achievement Tests	Document Review	Administrative Interview	Principal Interview	Teacher Survey Questionnaire	Student Attitude Scale	Student Attitutde Survey	Parent Attitude Survey	On-Site Observations
1. What are the planned types of instructional methodologies in the District and each school site?		X	X	X					
2. What are the actual types of instructional methodologies used in the District and at each school site?				X	X				X
3. What is the planned utilization of diagnostic and prescriptive techniques in the District and at each school site?		X	X	X	X				
4. What is the actual utilization of diagnostic and prescription techniques in the District and at each school site?				X	X				X
5. What is the planned utilization of individualized teaching in the District and at each school site?		X	X	X	X				
6. What is the actual utilization of individualized teaching in the District and at each school site?				X	X				X
7. Does the utilization of individualized teaching vary among basic skill areas in 7-12?				X	X				X

Table 3. Attitude Research Questions for the Process Study

ATTITUDES	Achievement Tests	Document Review	Administrative Interview	Principal Interview	Teacher Survey Questionnaire	Student Attitude Scale	Student Attitude Survey	Parent Attitude Survey	On-Site Observations
PARENT									
1. What are the parents' expectancies of BUSD?								X	
2. Do parent expectancies differ according to ESP vs $\overline{\text{ESP}}$ schools?								X	
3. Do parent expectancies differ according to their children's enrollment in K-6 (primary) vs. 7-12 (secondary)?								X	
4. Do parent expectancies vary according to child's race?								X	
5. Do parent expectancies vary according to parent education level?								X	
STUDENT									
1. What are the student attitudes in 1-12 toward themselves as learners in BUSD?						X			
2. Do student attitudes toward themselves as learners vary according to ESP vs. $\overline{\text{ESP}}$?						X			
3. Do student attitudes toward themselves as learners vary according to 1-3, 4-6, 7-9, 10-12 grade levels?						X			
4. What are the student expectancies of BUSD in grades 4-12?							X		
5. Do student expectancies vary according to ESP and $\overline{\text{ESP}}$?							X		
6. Do student expectancies vary according to grades 4-6, 7-9, 10-12?							X		
7. What are the student attitudes toward their instructional setting in 4-12?							X		

(continued on next page)

Table 3. Attitude Research Questions for the Process Study (Continued)

ATTITUDES	Achievement Tests	Document Review	Administrative Interview	Principal Interview	Teacher Survey Questionnaire	Student Attitude Scale	Student Attitutde Survey	Parent Attitude Survey	On-Site Observations
STUDENT (continued)									
8. Do attitudes toward instructional setting vary according to ESP vs. $\overline{\text{ESP}}$?							X		
9. Do attitudes toward instructional setting vary according to grades 4-6, 7-9, 10-12?							X		
STAFF									
1. What are the staff expectancies of BUSD?					X				
2. Do staff expectancies vary according to ESP and $\overline{\text{ESP}}$ schools?					X				
3. Do staff expectancies differ according to school site and K-3, 4-6, 7-9, and 10-12 schools?					X				

Table 4. Staffing Pattern Research Questions for the Process Study

STAFFING PATTERNS	Achievement Tests	Document Review	Administrative Interview	Principal Interview	Teacher Survey Questionnaire	Student Attitude Scale	Student Attitutde Survey	Parent Attitude Survey	On-site Observations
1. What is the intended adult/student ratio in the District?		X	X						
2. What is the actual adult/student ratio in the District?		X							
3. What is the intended adult/student ratio within school sites and ESP?		X	X	X					
4. What is the actual adult/student ratio within school sites and ESP?		X							
5. What is the intended Certified/Classified staff ratio in the District?		X	X						
6. What is the actual Certified/Classified staff ratio in the District?		X							
7. What is the intended Certified/Classified staff ratio within school sites and ESP?		X	X	X					
8. What is the actual Certified/Classified staff ratio within school sites and ESP?		X							
9. What is the intended minority (and female)-non-minority staff ratio in the District?		X	X						
10. What is the actual minority (and female)-non-minority staff ratio in the District?		X							
11. What is the intended minority (and female)-non-minority staff ratio in the District?		X	X	X					
12. What is the actual minority (and female)-non-minority staff ratio in the District?		X							

Table 5. Impact Study Research Questions

	IMPACT QUESTIONS	Achievement Tests	Documents Review	Administrative Interview	Principal Interview	Staff Questionnaire Survey	Student Attitude Scale	Student Attitude Survey	Parent Attitude Survey	On-Site
1	What is the intended K-12 basic skills achievement level in the District and school sites?		X	X	X					
2	What is the actual 74-75 basic skills achievement in the District and school sites?	X								
3	What is the actual 74-75 basic skills achievement in the District by grade?	X								
4	What are the relative K-12 basic skills achievement levels within and between K-3, 4-6, 7-8, 9, 10-12 schools?	X								
5	What are the relative 1-12 basic skill achievement levels between ESP and $\overline{\text{ESP}}$ school sites?	X								
6	What are the relationships between individualization and staff response variables.					X				X
7	What are the relative 1-12 basic skill achievement levels of varying curriculum models and staff response variables?	X	X	X	X	X				
8	What are the relative 1-12 basic skills achievement levels of varying instructional methodology models and staff response variables?	X	X	X	X	X				
9	What is the relative 1-12 basic skills achievement levels of varying degrees of individualization?	X								X
10	Is there a relationship between student self attitude and achievement in 1-12 and between 1-3,4-6, 7-9, 10-12?	X					X			
11	Is there a relationship between student attitude toward their instructional setting and achievement in 4-12 and between 4-6, 7-9, 10-12?	X						X		
12	What are the relative 1-12 basic skill achievement levels of varying staffing models?	X	X							

Instrument Development and Selection

The final specification of research questions led to a listing of the types of evaluation instruments which had to be developed or selected for the process study. The achievement tests selected and administered by B.U.S.D. were utilized in the impact study. Each instrument which was developed or selected yielded information from specific individuals which was needed to answer specific research questions. Prior to the actual development of these instruments, informal discussions and document searches were conducted in order to facilitate the efficient development of the basic structures and content of these instruments. Each of the instruments developed or selected for use in the evaluation study was submitted to the B.U.S.D. Research Department for approval prior to utilization. The selection and development of all instruments was guided by the American Psychological Association's *Standards for Educational and Psychological Tests* in (1974). All instruments are presented in Appendix I.

- Parent Survey -- The Parent Survey was a mail questionnaire which was designed to obtain information from B.U.S.D. parents on their expectancies of the school district. In translating the abstract concept of *expectancies* into concrete questions, Pacific Consultants determined that parents expect the district to provide both direct services to their children, and also services to themselves as their children's advocates. The list of potential services which schools can provide for children has grown longer in recent years. Pacific Consultants selected six types of potential school services to children about which questions were then formulated: basic skill curriculum, creative and physical activities, career education, student self esteem and personal health, student social awareness and development, and school climate.

The number and nature of school services to parents has also increased. Pacific Consultants chose six areas to use as a basis for questions: parent participation in the classroom, parent-teacher communication, parent involvement in school personnel selection, parent involvement in the content of schooling, parent selection of teachers, and level of parent information on program availability. The entire questionnaire included 22 services-to-children and 6 services-to-parents questions.

In order to structure parents' answers to the survey items in a manner which permitted quantitive tabulation, a set of four response categories were designed. The approach taken to structuring parents' answers reflects the relative complexity of the expectancy concept in a closed-ended questionnaire approach. The fundamental question is, "What do parents expect B.U.S.D. to do for their children and for them?". The answer to this question depends to some degree on parents' previous experience with educational entities in general and with B.U.S.D. in particular. Thus a parent may expect certain things of B.U.S.D. because of several background factors such as the following: 1) parents' own social value system; 2) parents' own schooling experiences; 3) parents' past and present experience with B.U.S.D. services; 4) parents' awareness of educational theory and professional practices. It is also important to note that with a list of services, all of which have some legitimate value to schooling, it is not appropriate to ask parents to rank services. To do so is to ask for a choice between essentials. In order to cope with these considerations Pacific Consultants adopted the position that what parents expect a school district to do is related to 1) their assessment of what is currently being done, and 2) their view of relative priorities of services. Even when parents are relatively naive about past and present district practices it is reasonable to assume that they will hold views regarding the need for certain direct services that they and their child presently need.

In order to operationalize the expectancy concept, Pacific Consultants asked parents to rate the degree of *attention* which they felt B.U.S.D. should give to each specific service. Should B.U.S.D. give the service Much More Attention, More Attention, or Less Attention? Or, is the status of the service satisfactory and thus without need of altered emphasis? An example of one of the Parent Survey items is as follows:

	Needs Much More Attention	Needs More Attention	Okay as is	Needs Less Attention
Berkeley Schools - Give each child a good feeling about her- or himself as a worthwhile person.				

In addition to the expectancy items of the Parent Survey, Pacific Consultants asked parents to identify their own level of education and how active they considered themselves in B.U.S.D. The race, ESP-Non-ESP assignment, and school of their child was known. As explained in the survey, this information would permit an examination of the different expectations held by different groups of parents.

- Administrator Interview Guide -- The Administrator Interview Guide was developed for the purpose of probing the philosophical and policy based views of central administrators on the processes and content of curriculum and instructional methodology. In the curriculum area, the interview was developed around six topics: 1) the administrative structure and its implications for B.U.S.D. policy development and implementation; 2) B.U.S.D. curriculum plans and objectives; 3) the curriculum planning and implementation processes; 4) the textbook selection planning and implementation processes; 5) curriculum relevancy; and 6) general evaluative comments about B.U.S.D. curriculum.

  In the area of Instructional Methodology, three topics were pursued: 1) B.U.S.D. policies for instructional methodology; 2) the planning and implementation processes associated with instructional methodology; and 3) general evaluative comments about B.U.S.D. instructional methodology. In addition, some basic questions about staffing goals and policies were asked of some administrators.

The Administrator Interviews were undertaken with a flexible approach but with the desire to obtain answers to as many of the interview items as possible. The items were formulated in a manner that would provide comprehensive coverage of all topics of interest. Yet, it was understood from the outset that because of the diversity of roles played by each administrator, only certain questions would be relevant to each. In addition, the length of time available for each interview could not, in most cases, be expected to exceed two hours. Therefore, the planned result of administrator interviews was a case study of B.U.S.D. policies and processes for curriculum and instructional methodology, as viewed from the central administrative level.

- Principal Interview Guide -- The Principal Interview Guide was developed for the purpose of surveying essentially the same topics as those employed in the administrator interview, but in a manner more consistent with the principal's or program director's role. The intended result would be a body of information on the processes and content of curriculum and instructional methodology, as perceived by principals and program directors. Respondents were asked to make their answers specific to their school and to relate their school's situation to district policy and practice. Because the administrator interviews were conducted prior to the principal interviews, the experiences of the former permitted a refinement of interview questions. It was therefore possible to present a somewhat abbreviated set of questions to principals and program directors which required approximately one hour of their time.

- Teacher Instruments -- Because of their presence in the classroom, teachers have the most direct adult view of the B.U.S.D. classroom experience. Consequently, Pacific Consultants designed two basic types of teacher instruments for the purpose of probing these views in an in-depth manner: the Teacher Survey (elementary and secondary versions), and the Teacher Interview Guides (secondary only in science, math, social studies, and English/language arts).

  The Teacher Survey consists of three sections, two of which were given to Seventh to Twelfth grade teachers and all three of which were given to Kindergarten through Sixth grade teachers. Part I of the Teacher Survey is a survey of expectancies of B.U.S.D. and is strictly analogous to the items included in the Parent Survey. It inquires about what each Kindergarten through Twelfth grade teacher expects from B.U.S.D. in terms of services to children and services to parents.

Part II of the Teacher Survey focused upon the instructional methods being practiced by each individual Kindergarten through Twelfth grade basic skill teacher.* This section was standardized by the Ontario Institute for Studies in Education and has been used in a variety of studies in Canada, California, and other states. It is referred to as the *Dimensions of Schooling Questionnaire* (DISC). Each item presents a dimension of schooling and the teacher is asked to rank the similarity of a series of descriptive alternatives to her/his own practices. The descriptive alternatives (three to five for each item) range from a very traditional to a very open practice. The degree of openness is operationally defined in the DISC as the degree to which students guide or participate in any particular instructional practice. Through a weighted scoring system, the answer to each item receives a score of 0 to 1, with more open responses receiving the higher scores on the scale. The DISC items were based on the following dimensions of schooling:

1. Setting instructional objectives
2. Materials and activities
3. Physical environment
4. Structure for decision making
5. Time scheduling

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*For teachers at the elementary levels, this section pertained to their self-contained classroom. For secondary teachers, this section pertained to their classroom that was observed by Pacific Consultant Field Analysts.

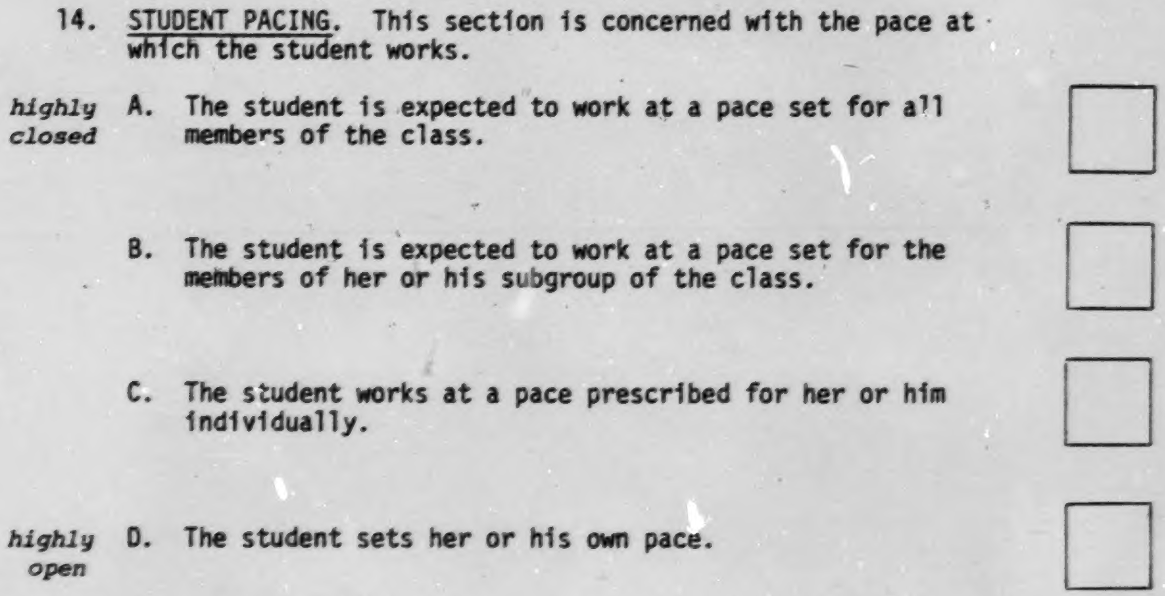
6. Individualization of learning
7. Composition of classes
8. Role of teacher
9. Student evaluation
10. Student control

The 28 DISC items which were developed around these dimensions encompassed the following specific topics:

1. Assignment of students to teachers
2. Age and ability range
3. Time scheduling
4. Free time
5. Rule making
6. Rule Enforcing
7. Defining General Objectives
8. Defining Instructional Objectives
9. Development of Materials
10. Selection of Materials
11. Students' Mobility
12. Flexibility of Environment
13. Learning Environment
14. Student Pacing
15. Independent Study Time
16. Student Interaction
17. Formulating Approaches to Learning
18. Peer Group Assistance
19. Other Adult Involvement
20. Cooperative Planning and Teaching
21. Media Usage
22. Teacher Focus

23. Teacher Role
24. Subgrouping Criteria
25. Subgrouping Stability
26. Evaluation Focus
27. Evaluation Timing
28. Student Role in Evaluation

The following is an example of a complete DISC item. The teacher was expected to place a *"1"* in the box adjacent to the practice most similar to her/his own, a *"2"* in the next most similar, and so on. These responses were of a forced choice nature as this could not be scored.



14. STUDENT PACING. This section is concerned with the pace at which the student works.

highly closed A. The student is expected to work at a pace set for all members of the class. ☐

B. The student is expected to work at a pace set for the members of her or his subgroup of the class. ☐

C. The student works at a pace prescribed for her or him individually. ☐

highly open D. The student sets her or his own pace. ☐

The DISC was standardized by the Ontario Institute for Studies in Education through two separate applications of the instrument to teachers in an assortment of schools. The instrument underwent a series of revisions before the presentation of the third version in the educational research literature (Traub, Weiss, Fisher, and Musella, 1972). Refinement and validation of the DISC began with the scrutiny and revisionary efforts of an educational task force from the Ontario Institute. It was then field tested on two extreme educational settings: an exemplar open school program and an exemplar closed school program. The DISC successfully discriminated between programs to the remarkable extent that the distributions of the two opposed schools did not overlap. In addition it was found in these Canadian studies, as well as in recent investigations in the Western United States (Fisher, 1975), that teachers encountered few if any difficulties in performing the ranking procedure.

In addition to the 28 DISC items in Part II of the Teacher Survey, Pacific Consultants also inserted four other items. These spoke directly to the issue of individualized teaching, as it was conceived to exist apart from open educational practices. These questions were based upon individualized versus traditional practices in four areas:

1. Evaluation procedures
2. Instructional objectives
3. Record keeping about pupil progress
4. Pupil diagnosis and prescription

A set of alternatives, in the manner of the DISC items, was offered for the teacher to rate similarity to her/his own practices.

Part III of the Teacher Survey focused upon curriculum issues in reading/language arts and mathematics. This section was given only to Kindergarten through Sixth grade teachers. Curriculum issues at the secondary level were probed via interviews which are described below. Pacific Consultants wished to develop a data base on B.U.S.D. curriculum practices and to analyze this data base in a manner that is in keeping with the most current theoretical and empirical state of knowledge in each curriculum area. In order to do so, a task force of curriculum specialists was formed. Herbert Simons represented the elementary level in reading and language arts while William Rupley represented the mathematics area at this level. They each developed the questionnaire items in their areas of specialization. Pacific Consultants modified their questions only where it was necessary to simplify and bring consistency to the overall response format.

The reading/language arts portion of Part III included three major questions. They dealt first with the degree of emphasis placed on a variety of subskills for students at each of three skill levels. Teachers were also asked to specify how much time they devoted per day to the teaching of reading/language arts to each of the three skill levels. Finally, teachers were asked to estimate the percentage of reading/language arts instruction time in which each of nine types of reading materials are used.

The mathematics portion of Part III included seven major questions, three of which were analogous to those of the reading/language arts portion. The first question asked teachers to specify the degree of emphasis placed on a variety of subskills for students at each of three skill levels. Teachers were then asked to specify how much time they devoted per day to teaching mathematics to each of the three skill levels. The third question in this portion of Part III asked teachers to estimate the percentage of mathematics instruction time in which each of fifteen types of mathematical materials are used. Teachers were asked to also estimate the percentage of mathematics instruction time given over to three different types of tasks which varied in abstractness. An estimate of percentage of time utilized in computation and non-computation tasks was also requested. Teachers then rated the degree of emphasis placed on each of nine different teaching approaches. Finally, teachers were asked to indicate how often homework was given during the week to students in each of the three skill levels.

Teacher Interview Guides were used to obtain the curriculum information from secondary basic skills teachers. Rather than ask for quantitative survey answers from all teachers as was done at the elementary level, it was determined that evidence of both the variety and the patterns which exist in secondary curriculums could best be obtained by interviewing a sample of teachers in each basic skill area. Thus, task force specialists in secondary curriculums prepared four interview guides. Dr. David Marsh, specialist in social studies, developed the Social Studies Interview Guide which served as the format model for the three other interview guides. Dr. Walter Loban developed the English/Language Arts Interview Guide. William Rupley developed the Mathematics Interview Guide and Dr. David Miller prepared the Science Interview Guide. Each set of interview questions attempted to identify the curriculum structure for the skill at issue within each particular school, to identify how each school articulated their program with other schools, and to determine how certain issues in the teaching of each of these basic skills was being handled. For example, the chairpersons at each secondary school in each basic skill area were asked to describe their department's organizational structure by personnel role and/or subject area emphasis. One indicator of articulation is the type of courses offered and the students for whom they are planned. All interview guides inquired about these properties of a school's curriculum. In addition, each basic skill curriculum specialist felt that certain educational strategies in their respective fields required inquiry. For instance, science teachers were asked about the types of community resources they use and with what frequency. They were also asked about their laboratory procedures, the skills which they find that their students bring into their classes, and the innovative methods being used. A full appreciation of the depth and breadth of all four types of Teacher Interviews may be obtained by perusing the interview guides in Appendix I.

- Student Opinion Poll -- A two part opinion poll was developed and administered to a sample of Fourth to

Twelfth grade students. Part I of the Student Opinion Poll was virtually identical to the first portion of the surveys of expectations utilized in the Parent Survey and the Teacher Survey. Thus, students were asked to identify their expectations of B.U.S.D. in terms of services to children.

Part II of the Student Opinion Poll deals with student assessments of the instructional setting. The construction of instructional setting items began with the designation of several instructional setting variables: 1) the physical environment; 2) the social and interpersonal climate; 3) instructional and administrative properties; and 4) curriculum. Twenty-two questions were developed around these themes. Students were given four response options ranging across a *Strongly Agree* to a *Strongly Disagree* continuum. An example of an item that was developed for the instructional methodology variable is as follows:

	Strongly Agree	Agree Somewhat	Disagree Somewhat	Strongly Disagree
My teachers try to give me the kind of work that matches my abilities - not too simple and not too hard.				

- Student Attitude Scale -- In order to measure the attitudes of students toward themselves as learners, Pacific Consultants first defined this type of attitude as academic self image. There are a number of commerically available instruments (e.g., SCAMIN, Peers-Harris), and also a number of widely used research instruments which focus on the academic and personal self images of children. These instruments were reviewed according to several standards: 1) appropriateness to age and population characteristics of the students; 2) test-retest reliability; 3) validity; 4) content agreement with research purposes; 5) ease of administration; and, 6) cost of materials.

  The Self-Concept and Motivation Inventory (SCAMIN) was ultimately chosen. Among the major reasons that the SCAMIN was selected is that it is the only self-concept test with a fairly widespread history of usage (albeit a recent history) which has several alternate forms that make it appropriate to the entire range of school-age children. Thus, the selection of the SCAMIN permitted the testing of children in grades one through twelve with essentially the same test form. Moreover, the SCAMIN was used in the large-scale longitudinal study of the Experimental

School Program in San Antonio, Texas. Conversations with the director of that study revealed that the instrument had proven highly satisfactory even in its use with very young children. Test administration and scoring had proceeded without the occurence of problems that could be attributed to the test. The directors of the San Antonio study had been satisfied with their examinations of the test-retest characteristics of the SCAMIN with their San Antonio children. The official reliability coefficents reported for the SCAMIN standardization sample are as follows: Secondary Form = .93; Later Elementary Form = .83; and Early Elementary Form = .77.

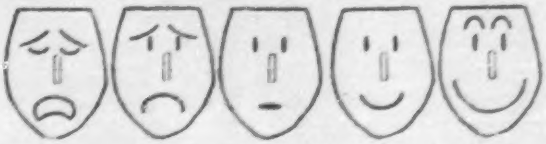
A determination of the validity of the SCAMIN can at present be judged only in terms of the face validity of the items. This was found to be satisfactory by both Pacific Consultants and by the evaluators of the San Antonio ESPs.

The SCAMIN profile consists of four scores: achievement needs, achievement investment, role expectations, and self-adequacy. These four scores constitute measurement of basic constructs, self-concept, and motivation. The elements of self-concept are role expectations and self-adequacy. The elements of motivation are achievement needs and achievement investment scores. Only these two most basic concepts and their aggregate were utilized in the B.U.S.D. Evaluation Study. The response categories for the SCAMIN span a five position continuum which ranges from very unhappy, somewhat unhappy, neutral, somewhat happy, to very happy. Each of these reactions is depicted via facial representations on the Early and Later Elementary Forms, with the child's response to each item consisting of the darkening of the nose on the face bearing a reaction like her/his own. Older children may refer to these pictorial reactions but are expected to respond to sequential alternatives. Examples of SCAMIN items on the various forms are as follows:

Early Elementary Form

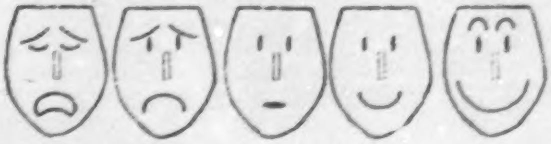
What face would you wear if you could tell a friend a word that he needed to know?

1



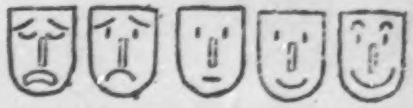
What face would you wear if you made a mistake in front of the whole class?

2

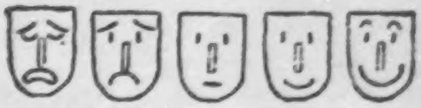


Later Elementary Form

What face would you wear . . .
. . . If you were reading a story that you had written for your parents?



What face would you wear . . .
. . . If you had to ask the teacher for help with your arithmetic?



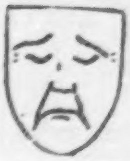
Secondary Form

What face would you feel like wearing inside . . .
. . . If a respected adult friend asked you if you had considered going into her/his line of work?

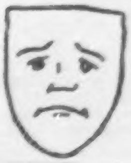
A B C D E
1 ▯ ▯ ▯ ▯ ▯

What face would you feel like wearing inside . . .
. . . If an adult relative, other than your parents, showed disappointment over your report card grades?

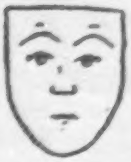
A B C D E
2 ▯ ▯ ▯ ▯ ▯



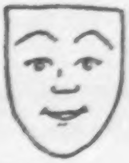
A = *I would feel about as unhappy as I could.*



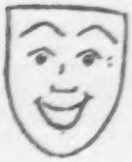
B = *I would feel somewhat unhappy.*



C = *I wouldn't feel one way or the other.*



D = *I would feel somewhat happy.*



E = *I would feel as happy and proud as I could.*

- On-site Observation Instrument -- The process of selecting a classroom observation instrument began with a conversation with Dr. Laval S. Wilson, Superintendent. The purpose of this discussion was to define as clearly as possible the desired nature of the behaviors to be observed. A vast number of classroom observation systems have been developed in the past ten years (e.g., Simon and Boyer, 1965). Each focuses upon a somewhat different spectrum of student and adult behaviors and interactions, as well as a variety of environmental features. As a result of deliberations with the Superintendent and the district research officer, it was determined that the classroom observations should describe the degree to which individualized teaching procedures are presently being implemented in B.U.S.D. In response to another district interest, racial integration, it was also determined that classroom observations would provide an opportunity to view this process within the instructional setting per se.

  In order to record the targeted classroom occurences, a three part observation instrument was assembled. Part I consisted of the I-Scale, an instrument for surveying the level of individualization in the classroom. Part II was devised for the purpose of classifying the observed classroom procedures into one of four different types of individualization, or alternatively, into a fifth category for the traditional teaching style. Part III consisted of a tally of the racial composition of the classroom and of groups within the classroom when students were so divided.

Part I of the observation instrument, the I-Scale, was developed in 1969 at Hofstra University by Drs. Pierre Woog and Estelle Gellman. The I-Scale was developed for the purpose of assessing the degree of individualized teaching that was being implemented in three school districts in Connecticut. Individualization was operationally defined by Woog and Gellman (1974) to be consistent with the twelve polar characteristics which were developed in Charles Danowski's work on individualization (1965). The I-Scale incorporates ten of these twelve characteristics into six subscales. Each subscale is scored for every time slot observed during the forty minute classroom observation. The six I-Scale subscales are as follows:

1) Duration of large group instruction versus classroom subgrouping
2) Duration of teacher domination of the large group approach
3) Diversion of teacher domination to student-specific needs or inputs

4) Student initiated learning tasks

5) Discussion of instructional task among students.

6) Presence of student initiated artifacts in the classroom.

The I-Scale was pilot tested in New York where high inter-rater reliability was found to be readily obtained. Detailed validation work was performed by the authors. First, Dr. Danowski reviewed the instrument's underlying premises and their correspondence to the variables of individualization which had been developed through his own research. Further, I-scores were obtained in the field during actual observations and compared to the subjective assessments of individualization made by independent observers' engaged in viewing the same classroom setting. On the strength of these reliability and validity procedures, the I-Scale was utilized for two years in the Title III project. Its subsequent use in the Hempstead School District and by the Board of Cooperative Educational Services served to verify the discriminatory power of the scale. That is, direct tests were made of the test's ability to distinguish between teaching practices which were on opposite ends of the individualization continuum. Specifically, the I-scale was used as a pre-test with teachers prior to the onset of in-service training in individualized teaching approaches.

It was subsequently used with these teachers as a post-test to gauge the changes, if any, associated with the in-service training experience. In all cases, the I-Scale reflected statistically reliable differences between pre- and post-training levels of individualization.

It is *very* important to establish and to emphasize exactly what the I-Scale measures and exactly what it does not measure. The I-Scale *does* measure a discrete set of teacher and pupil behaviors and relates these to the physical context of the classroom. These observation targets were defined on a theoretical basis which speaks to what might logically be expected to occur if a teacher distributes instructional efforts in a more diffuse individual-oriented manner as opposed to a more global whole-group-orientation. The I-Scale *does not* provide a direct measure of teacher effectiveness, quality education, or any other product-based quantity. Of course, the rationale for employing individualized teaching approaches originates with the hypothesis that these approaches will ultimately bring greater quality to the education of the students who experience them. There is also a sizeable body of evidence which indicates that when the specific perceptual, motivational, and cognitive attributes of an individual child are carefully matched to instructional materials and strategies, the learning and performance of that child are enhanced (e.g., Johnson, Warner, and Silleroy, 1971). However, several other factors must be specified before a direct link can be forged between an I-Score and the assumption about teacher effectiveness. For instance, there are a number of different types of individualized teaching. It has been unknown heretofore what type of I-Score might be associated with any particular one of these individualized approaches. In addition, it is not known what type of individualization is likely to be most beneficial in terms of student outcomes, if indeed any type is effective. Further, the relative merits of the various forms of individualization with students of varying ages, sexes, races, skill levels, socioeconomic background, learning style, etc., is unknown.

Hence, the I-Scale was selected for use in the B.U.S.D. Evaluation Study merely because it targeted certain behaviors and classroom characteristics. It was not selected as a measure of individual teacher, school, or program effectiveness. The first order product of the I-Scale was designed to be a description of the extent to which individualization of teaching, as operationally defined by the I-Scale, is being utilized throughout the district. A more definitive explanation of the implications of these I-Scores was assigned to Part II of the Classroom Observation Scale and finally to the Impact Study.

Part II of the Classroom Observation Instrument contains a six category check list. Each of four categories represents a major recognized approach to individualized teaching. Each of these approaches or *models* of individualization is based upon current analyses in the educational research literature of varying modes of individualization (e.g., Hambleton, 1974). The fifth category represents the traditional whole-group approach. The sixth category was to be designated only in those instances in which the instructional method absolutely defied description by the other five categories. The fundamental criteria for each model of individualization is as follows:

1. Active, Teacher-Directed Individualization
   - a) Students are working on different materials or different levels of the same material.
   - b) Materials assignment is made by the teacher based upon teacher knowledge or records of student progress.
   - c) Students are expected to work on the assignments/activities suggested by the teacher.
   - d) Learning activities are directly related to specific skills the teacher wants individual students to learn.

2. Responsive Individualization
   - a) Students are working on different materials or different levels of the same material.
   - b) Materials/activities are selected by students from a set of materials/activities that have been carefully chosen by the teacher to stimulate the students in certain ways.
   - c) Students are not completely directed by the teacher, but the teacher may question the student during activities or stand by and respond or encourage the student to go further in exploring the activity.
   - d) Learning activities are directly related to specific skills that either the teacher or students have selected to learn.

3. Permissive, Cognitive Individualization
   - a) Students are working on different materials or different levels of the same material.
   - b) Material/activity selection is made by the student, with no teacher influence.
   - c) Student activity is self-directed, with limited or no teacher direction or influence.
   - d) Learning activities are primarily related to accomplishing cognitive objectives.

4. Permissive, Noncognitive Individualization
   - a) Students are working on different materials or different levels of the same material.
   - b) Material/activity selection is made by the student, with no teacher influence.
   - c) Student activity is self-directed, with limited or no teacher direction or influence.
   - d) Activities are either related primarily to noncognitive objectives or several children (two or more) appear to be uninvolved in cognitively oriented activities.

5. Non-Individualized
   a) Students are working on the same materials at the same level.
   b) Material/activity assignment is made by the teacher based upon whole class objectives.
   c) Students are expected to work on the assignments/activities made by the teacher.
   d) Learning activities are related to the teaching of classroom goals/objectives.

6. Does not apply

   Classroom instructional methodology does not fit any of the above models.

Part III of the Classroom Observation Instrument was promoted by the early deliberations with the Superintendent regarding desired evaluation products. Part III was designed for the sole purpose of documenting the classroom and intra-classroom aspects of racial integration in B.U.S.D. basic skill classes. First, a simple tally was made of all Black and all Non-Black students in the classroom. Secondly, in classes which were subdivided into groups, a count was made of the number of children in racially homogeneous groups (i.e., all children in a group are Black or all children in the groups are Non-Black). A count was also made of all children in groups, whether the groups were homogeneous or heterogeneous. The percent of grouped children functioning in homogeneous groups was then derived. Tallies were taken on one occasion, approximately 20 minutes into the observation. For Seventh to Twelfth grade classrooms, the remedial versus regular designation of the class was also coded.

In developing Part III of the Classroom Observation scale, the objective was to devise a method of recording aspects of integration which could be done quickly enough and with enough ease to permit the observer's primary observation tasks to proceed unimpaired. In order to preserve the quality of the I-Scale recording and to also obtain these indices of integration it was necessary to sacrifice some of the more sensitive possibilities for these indices that would otherwise have been desirable. For example, the category Non-Black is too inclusive for a truly representative picture of multi-cultural integration practices. Moreover, nothing was recorded about the quality of interaction between children in the two racial categories and there was no description given for the method by which children were assigned to groups. Nevertheless, the expected product of Part III is a documentation of Black/Non-Black classroom ratios as well as a statement of the typical incidence of homogeneous student groupings throughout the school district.

- Early Childhood Education Surveys -- The purpose of the ECE instruments was to gain an understanding of the program and to receive input about its current status, strengths, and weaknesses. In order to do this, two instruments were used. The interview guide was used to conduct personal interviews with the three supervising teachers. It contained items about program content, objectives, curriculum and related services. The staff questionnaire was a self administered form which was distributed to all Children Center and Parent Nursery staff. This questionnaire was used to obtain staff assessments about the education program, related services and staff and district effectiveness.

- Adult Education Survey -- The purpose of the Adult Education Survey was to develop a description of the Adult School's Current Status. The Survey focused on four areas: 1) school objectives; 2) existing instructional programs; 3) school accomplishments; and 4) needs of the Adult School. The Adult Education Survey was used as an interview guide to elicit information on these topics. The school's three administrators (Principal, Vice-principal, and Supervisor of Basic Education) were each interviewed for approximately two hours.

- Comprehensive Test of Basic Skills -- The Comprehensive Tests of Basic Skills (CTBS) is the instrument used to assess the achievement level of most B.U.S.D. children. This battery of tests has been revised twice in recent years. The version published in 1968 is called *Form Q* and the version published in 1969 is known as

Form R. In 1974, the newest version, *Form S*, was published. This version offered the advantage of having appropriate tests for children in the entire school age range of Kindergarten through Twelfth grade. The previous versions had not had tests for Kindergarten through Grade Three. The remaining problem is that the CTBS is an inadequate assessment of the specialized or advanced skills of many of the secondary students.

B.U.S.D. administered all three CTBS versions to students during the 1974-1975 school year. As a result, the great mixture of test data then had to be converted to a single type of scale score (*Form S*) for each grade level. This conversion "equated" all three versions of the CTBS to a single equal interval scale for each grade level. Although the CTBS has tests for three basic skill areas (Reading, Language, and Mathematics), the total reading and mathematics scores were used in the evaluation study as indices of school achievement. The following description by McGraw-Hill, the publishers of CTBS (1974) explains the underlying rationale of the test battery:

> *The Comprehensive Tests of Basic Skills, Expanded Edition, were designed to measure the extent to which individual students have developed the capabilities and learned the skills that are prerequisite to studying and learning in subject matter courses, and necessary for functioning in a society based on daily use of language and number.*

These basic skills are developed through exposure to a variety of curriculums and instructional procedures. Unlike tests of academic achievement in a particular subject area, these tests of basic skills are not greatly affected by the particular content material used to teach the students. Performance on these tests is affected, however, by the grade level at which topics are introduced into the curriculum and by the development of the capabilities necessary to perform the task. The tests were developed on the assumption that a student's competence in dealing with content of high complexity increases as he progresses through school. The validity of this assumption was tested in item tryouts on a national sample.

The measurement of these skills and abilities cannot be divorced entirely from the measurement of knowledge acquired through schooling, but it is not the intent of these tests to measure this knowledge directly. The emphasis in this series is on the measurement of the grasp of broad concepts and abstractions as developed by all curriculums, and on facility in the skills that are required in the effective use of language and number such as classifying, manipulating, translating, and interpreting.

The complete classification scheme for the rationale was developed with the view that it would be understood by teachers and could be used to determine major strengths and weaknesses in terms of instructional objectives and content. The scheme is so arranged that there is an inherent hierarchy of skills, or levels of thinking, consistent with what is currently known about child development, cognitive structures, and learning processes.

In the development of the tests, attention was given to long-term trends in curriculum such as contemporary mathematics programs and the linguistic approach to the teaching of language arts. Items reflecting these trends were used only when there was reasonable expectation that students in traditional curriculums would understand them. Items were excluded that could not be assumed to be based on common experience.

- Cooperative English Tests -- Because the CTBS is considered inadequate for the testing of advanced English or language arts skills at the secondary level, the Cooperative English Tests (1960) are given to some secondary students. The Cooperative English Tests measure achievement in reading and written expression. There are three forms of two tests: 1) Reading Comprehension, and 2) English Expression. The Reading Comprehension Test includes a Vocabulary and Reading Part which yield Vocabulary, Level of Comprehension, Speed of Comprehension, and Total Reading Comprehension scores. The English Expression Test includes an Effectiveness and a Mechanics Part which yield English Expression and Total English scores.

- Cooperative Mathematics Tests -- The Cooperative Mathematics Tests are used to assess the mathematical achievement of the advanced B.U.S.D. secondary students. Educational Testing Service, publishers of the Cooperative Mathematics Test (1964), describes it in the following terms:

  > *The Cooperative Mathematics Tests measure achievement in the major content areas of mathematics from junior high school arithmatic through calculus. Achievement is assessed in terms of students' comprehension of the basic concepts, techniques, and unifying principles in each content area. Where possible, many of the newer trends and emphases in mathematics are represented in the tests, but content has been selected carefully to ensure the appropriateness of the tests for most students.*

Ability to apply understanding of mathematical ideas to new situations and to reason with insight are emphasized. Factual recall and computation are minimized.

The Cooperative Mathematics Series is readily adaptable to most mathematics curricula. At the junior high school level, the series includes tests in both Arithmetic and Structure of the Number System. The Arithmetic test stresses understanding and application of mathematical principles embodied in arithmetic, as opposed to "consumer" arithmetic, and is appropriate for classes in either traditional or modern mathematics. The Structure of the Number System test is designed primarily for classes in modern mathematics. Three algebra tests in the series, designated I, II, and III, correspond approximately to courses frequently termed "elementary," "intermediate," and "college" algebra. The Algebra III test is also appropriate for the algebra portions of courses in elementary college mathematics. Many concepts introduced in a lower level algebra test are developed further in a higher level test.

The Geometry test has two parts and can be administered in either a long or short version. Part I may be given alone to survey the important outcomes of a typical high school geometry course. Or, the total test may be given to provide a more thorough treatment of the concepts tested in Part I, plus application of geometry in three-dimensional space. It is recommended that the longer, more reliable total Geometry test be administered whenever it is appropriate.

The Trigonometry test and the Analytic Geometry test cover the work commonly included in separate one-semester high school or college courses in these subjects or in integrated courses in elementary college mathematics. The two-part Calculus test is designed to cover work in analytic geometry and calculus through differential and integral calculus of algebraic and transcendental functions, and includes work on topics such as the theorem of the mean and limits of indeterminate forms. About four-

fifths of the test is devoted to calculus and one fifth to analytic geometry. The test is appropriate for students who have completed work in separate courses in these content areas or at least a full year of work in these combined areas.

Instrument Pretests

The products derived from the instrument development and selection phase of the Evaluation Study were 11 independent evaluation instruments: 1) the Parent Survey; 2) the Administrator Interview Guide; 3) the Principal Interview Guide; 4) the Teacher Survey (elementary and secondary versions); 5) the Secondary Teacher Interview Guides (reading/language arts, mathematics, social studies, and science versions); 6) the Student Opinion Poll (Parts I and II); 7) the Student Attitude Scale (SCAMIN); 8) the On-site Observation Instrument (Parts I, II, and III); 9) the Early Childhood Education Interview Guide; 10) the Early Childhood Education Questionnaire; and 11) the Adult Education Interview Guide. Each instrument was reviewed in terms of the need for pilot applications prior to actual utilization in the date collection phase. It was determined that four of the evaluation instruments required pretesting before they could be used in the full scale field operations. Consequently, the Parent Survey, the Teacher Survey, and the Student Opinion Poll were administered to clusters of B.U.S.D. participants that were not included in the Evaluation Study sample. The pretesting of these surveys as well as the Observer training and pretesting of the Classroom Observation Instrument was performed within a six-week period.

The principal reasons for pretesting the evaluation instruments were to 1) establish the ability of participants to comprehend the items contained in the self-administered surveys; 2) to provide a test of the discriminatory power of the items contained within each instrument; 3) to assess the ease of administration and scoring of each of the four instruments; 4) to establish inter-rater reliability for the Classroom Observation Instrument; and 5) to make judgments regarding the face validity of all pretested instruments. The remaining instruments, almost all of which were interview guides, were reviewed in-house rather than being field tested. This approach was taken because each of these remaining instruments was to be utilized by core evaluation staff in loosely structured verbal exchanges. The extensive interviewing experience of the core staff and its familiarity with the data needs of the Evaluation Study obviated the need for more rigorous pretests.

- Parent Survey -- The Parent Survey was administered to fifteen B.U.S.D. parents. On February 5, 1975, it was given to thirteen parents whose children were enrolled in Compensatory Education classes in grades Kindergarten through Sixth. The remaining two parent participants were members of Berkeley High School's P.T.A. They completed the survey on February 10. As a result of these clinical pretests with the Parent Survey, several changes in phraseology were made to make the items easier to understand.

- Teacher Survey Pretest -- The Teacher Survey was pretested on seven certificated personnel. In order to avoid contamination of the research sample, skill specialists at the Kindergarten to Sixth grade levels were selected. These persons, though not currently in the classrooms, were all recent classroom teachers. At the secondary level it was possible to find two teachers who, while instructors within the basic skill areas, were on leave for the 1974-1975 academic year. The Teacher Survey was submitted to each person for self-administration. As a result of this pretest, several questions were removed from both Part II (DISC items) and Part III (mathematics and reading/language arts curriculum items) to eliminate redundancy. Otherwise, the teachers who participated in the pretest did not exhibit undue difficulty in completing the Teacher Survey form. This finding was substantiated by earlier utilization of Part II (DISC) -- the largest portion of the survey -- in independent pretests and large scale research conducted in Canada by the Ontario Institute for Studies in Education and in Los Angeles, California, by Far West Regional Educational Laboratory.

- Classroom Observation Instrument -- Because the I-scale had been extensively pretested for validity, reliability, and ease of administration by its authors (Woog & Gellman, 1974), Pacific Consultant's pretest was devised primarily to give observers practice and to establish inter-rater reliability. Training in administration and scoring of the I-Scale was given during a three-day session using simulated classroom situations as well as actual observations in two classrooms at John Muir School. Woog, one of the authors of the I-Scale, conducted a one-day training and practicum session on the use of the I-Scale. By the end of this session, the core of classroom observers and professional project staff were able to record and score classroom situations with greater than .80 inter-rater agreement. In addition, the level of agreement on selection of models of individualization was extremely high (estimated .90). Part III of the observation instrument required that the number of Black and Non-Black students be counted. There was no inter-rater discrepancy on this task.

- Student Opinion Poll and Student Attitude Scale (SCAMIN) -- The SCAMIN was pretested with four classes at each of four levels, grades One, Four, Seven, and Twelve. The Student Opinion Poll was administered at each of these grade levels except First grade. Both instruments were first administered on February 11, 1975, to thirty-four Twelfth grade students enrolled in Berkeley High School's multigraded Chorus Chorale. The Student Opinion Poll was also administered to twenty-four Seventh graders at Willard Junior High School on February 13. In the two upper grades, both instruments were administered during the same session. In the Fourth grade, classroom scheduling would not permit the administration of both instruments on the same day. Consequently, the Fourth grade class at Malcolm X Elementary School was given each instrument at different times. On February 22, the SCAMIN was administered to twenty-two students, and on February 26, the Student Opinion Poll was given to the same group of students. A First grade class at LeConte pretested the SCAMIN, with twenty-four students completing the forms on February 8.

The pretests with student attitude measures indicated that the instrument items were comprehensible to students at all designated levels and that administration of the instruments could be accomplished under realistic field conditions and within the given time constraints. The pretest experience also dramatized the desirability of obtaining teacher cooperation during instrument administration for classroom management purposes, and the need for reading items aloud to students with formative reading skills.

Sampling Plan

Fundamental to all major aspects of the Evaluation Study was the design of an effective and efficient sampling plan. The sampling plan is intricately tied to both the content and the level of analysis specified by the research questions. That is, not only do the research questions dictate who must be sampled via each instrument, they also determine how general or how specific the answers to the research question should be. For example, the research question involving parent expectancies for B.U.S.D. demanded that a survey be conducted with B.U.S.D. parents regarding their expectancies for B.U.S.D. When this research question was applied to the sampling plan it was also determined that inferences were desired about several subgroupings of parents: parents of ESP and Non-ESP children, and parents of elementary level and secondary level children. For the sake of selecting a group of respondents that was not systematically biased in demographic characteristics, a random, proportioned sample was drawn from each of the four strata; i.e., 400 from elementary ESP, 800 elementary Non-ESP, 400 Secondary ESP, and 800 Secondary ESP parents. Table 5 (Refer to Page 33) details the relationship between participants, instruments, and sample sizes that were observed in the sampling plan.

Data Collection Procedures

The data collection process required a three point series of planning and implementation activities. The individuals within the samples to which each instrument was administered were identified. The classroom observers who later conducted all classroom observation procedures were selected and trained. Finally, the field phase of the evaluation study was implemented in which data was gathered from all data sources.

- Sample Selection -- Table 6 describes the quantity and target of sampling undertaken for each instrument. It was then necessary to identify precisely who would be sampled by each instrument. In the case of B.U.S.D. administrators, principals, program directors, basic skill teachers, Early Childhood Education and Adult Education administrators, virtually the entire population of each of these groups was named and included in the data collection process. The sample of secondary teachers who were selected for the secondary curriculum case study was determined by a simple formula. First, the Chairperson of each of the four subject areas at each school was selected. Secondly, the balance of interviewees in science and English/language arts at each school were selected according to the internal course and specialization structures of these departments. In science the

Table 6. Relationship between Participants, Instruments, and Sample Sizes

Respondent	Approximate Size	Instrument	Sample Size	Sampling Method
BUSD Administrators	10	Administrator Interview Guide	10	Contact all significant sources of relevant information
School Principals	21	Principal Interview Guide	21	Inclusive
ESP Administrators	18	Principal Interview Guide	18	Inclusive
Certified Teachers in Observation Classrooms	600	Teacher Survey & Questionnaire	600	Inclusive
Secondary English/Language Arts Teachers	69	Secondary English Interview Guide	19	Chairperson plus representatives of English electives and basic skills
Secondary Mathematics Teachers	56	Secondary Mathematics Interview Guide	14	Chairperson plus other random math teachers
Secondary Science Teachers	31	Secondary Science Interview Guide	11	Chairperson plus representatives of biological and physical sciences
Secondary Social Studies Teachers	60	Secondary Social Studies Interview Guide	14	Chairperson plus other random social studies teachers
BUSD Students in Grades 1-12	13,000	Student Attitude Scale (SCAMIN)	1,200	At least one random classroom for each school with approximately 300 students represented at the 1-3, 4-6, 7-9, and 10-12 levels respectively.
BUSD Students in Grades 4-12	9,000	Student Opinion Poll	900	At least one random classroom for each school in the 4-12 range, with approximately 300 students represented at the 4-6, 7-9, and 10-12 levels respectively.
BUSD Parents	7,000	Parent Survey	2,400	Random sample distributed across ESP (1/3 of sample) and ESP (2/3 of sample) with an equal number of ESP primary and secondary parents and an equal number of ESP primary and secondary parents
Basic Skill Classes	600	On-Site Classroom Observation Instrument	600	Each K-6 regular class and one class of each 7-12 basic skill teacher
ECE Administrators	3	ECE Administrator Guide	3	Random
Adult Education Administrators	3	Adult Education Administrator Guide	3	Inclusive

courses are roughly divisible into biological and physical sciences. Thus, the random selection was made from the teachers representing each of these course offerings at each school. In English/language arts, courses are roughly divisible into English/language arts electives and basic skills. Thus, representatives were randomly selected from each of these domains at each school.

For the limited samples of the SCAMIN and the Student Opinion Poll, it was possible to select, on the average, only one classroom of students per B.U.S.D. school or ESP program. Therefore, it was determined that *at least* one classroom must be selected from each of these entities and that a balance must be achieved between the number of classroom grade levels selected at each type of school. For example, within a given number of primary schools or programs, approximately the same number of First grade, Second grade, and Third grade classrooms must be selected. Beyond these restrictions, random selection practices were applied. Parents were selected for the Parent Survey sample by virtue of their children's school ID number. Having specified that the total sample would be 1/3 ESP parents and 2/3 Non-ESP parents, and that an equal number of parents with elementary and with secondary children would be chosen, subsamples of students in each of these four groups were constituted from computerized student ID cards. A random sample of the appropriate size was then selected from these subsets and printed out. The achievement tests of Kindergarten through Twelfth grade students were given by B.U.S.D. schools under the direction of the B.U.S.D. Research Department.

Recruitment and Training of Classroom Observers -- In preparation for the classroom observations and general data collection process, Pacific Consultants recruited a small corps of observers. The employment criteria demanded that each individual have experience and training in public education, data collection procedures, and community related activities.

A three-day training workshop was conducted for observers and core staff. The agenda covered 1) the general research standards and issues of the Evaluation Study; 2) the conceptual background and administration procedures for the I-Scale, SCAMIN, and Student Opinion Poll; 3) logistic assignments and procedures; 4) inter-rater reliabilities; and 5) data confidentiality, protection, and filing. The four core staff prepared the agenda, materials, and general content of the training session. Dr. Pierre Woog, developer of the I-Scale conducted a workshop for observers and core staff on the rationale, administration, scoring and interpretation of the I-Scale. Dr. Woog also supervised the establishment of inter-rater reliabilities for the I-Scale.

In terms of general research standards and issues for the Evaluation Study, observers were briefed on the total scope of objectives and procedures being employed in the study. The issues of comprehensive and precise recording and scoring and uniform observation times were emphasized and demonstrated. Dr. Woog's delineation of the nature and rationale of the I-Scale constituted a major training item and also provided a footing for a series of classroom examples which were recorded, scored, and interpreted by observers and core staff. These hypothetical examples were supplemented by field observations of classrooms typifying both highly individual and highly traditional methodologies. Formalized decision rules were discussed and adopted. Additional classroom examples were then recorded and scored in order to verify that consensus had been developed between all observers and core staff.

In addition to the I-Scale training, observers were also trained in the conceptual background of the Student Opinion Poll, SCAMIN, and Teacher Survey instruments and in their administration. Observer teams were formed and school and classroom assignments established. Finally, specific procedures were described and demonstrated for checking in completed data. Throughout the training session the critical need for maintaining confidentiality of research information was stressed.

- Data Collection Process

  - Parent Survey -- The parent survey was mailed to each parent specified by the sampling procedure. Each envelope contained an explanatory letter from the Superintendent, the survey, and an addressed and stamped envelope. Approximately six weeks following the first mailing, a second questionnaire, envelope, and reminder were sent to those parents who had not already returned their questionnaires. In addition to the mailings, Pacific Consultants received numerous phone calls from parents who wanted more complete explanations or descriptions of the Evaluation Study and the Parent Survey, or additional instructions for completing the survey. These calls were personally handled by core staff.

  - Administrator Interview -- The interviews with B.U.S.D.'s central administrators were the first process data to be collected. Informal preparatory discussions were held with administrators in order to inform them of the objectives of the study and obtain guidance on data collection efforts with other participants. Subsequently, a schedule was established with each of the administrators selected for interviewing. Each interview required one to two hours and was personally conducted by one or more of the core staff members.

- Principal Interviews -- The principals and program directors of each B.U.S.D. school and program were interviewed with the Principal Interview Guide. These interviews, each of which required approximately one to two hours, were personally conducted by core staff members.

- Teacher Surveys -- The data collection procedures for the Teacher Survey began with some introductory steps. The Assistant Superintendent of Planning and Program Implementation introduced the core staff of the Evaluation Study at the monthly meeting of principals and program directors in February. At that time Pacific Consultants explained the research objectives of the study, the type of data that would be obtained from students and teachers at B.U.S.D. schools, and the various procedures and personnel that would be used to accomplish these ends. Each principal and program director was provided with a package of summaries of the study and its procedures and asked to distribute one of these to each of the teachers at her/his school. The core staff responded to questions and made themselves available for future conversations.

The procedures for distributing and collecting the Teacher Survey were modified during the field phase of the study. Initially, the Teacher Survey was distributed to individual teachers by classroom observers as a task related to the classroom observations of each basic skill teachers. At some schools, principals convened staff meetings during which the surveys were passed out to all teachers, explanations were provided by observers, and teachers completed and turned in the survey at that time. For the schools at which surveys were given to teachers when the class was observed, the expectation was that the observer would pick the survey up the next day in order that surveys from all teachers would be obtained slightly following the completion of observations.

A second procedure for distributing and returning Teacher Surveys was instituted when it became apparent that teachers generally wanted more than one or two days to complete their surveys and that the original procedure was not proceeding quickly or productively enough. A general meeting of principals and program directors was convened by Dr. Colum, Assistant Superintendent of Planning and Program Implementation. Teacher Surveys were given to principals and program directors to distribute to teachers who had not received them. Arrangements were made to pick up the completed surveys the following week.

When surveys were received which contained large blank portions or which demonstrated a basic misunderstanding of instructions, the individual teacher was provided with a copy of the portion in question and instructions for completing it. In keeping with the sampling plan, it was expected that every teacher would fully complete a Teacher Survey.

- Teacher Interviews -- The case studies of science, mathematics, reading/language arts, and social studies at the secondary level were prepared from data collected during interviews with a sample of teachers in these areas. The Chairperson of each of these subject area departments at each secondary school was contacted by a core staff pers[illegible]e purposes and general procedures associate[illegible] the interviews were explained and cooperation and support was requested. An interviewer was chosen for each area who was an educational specialist in that area. The interviewer made appointments with each person selected for the case study sample. Each of the interviewees was sent a summary of the Evaluation Study objectives and of the interview guide prior to the actual interview. The interview required approximately one hour of the teacher's time. The interviewer was responsible for submitting completed interviews and a summary and conclusions paper for the total series of interviews.

• • Student Opinion Polls and SCAMIN -- The Student Opinion Polls and SCAMINS's were administered by classroom observers during the phase in which they were conducting observations in that particular school. When an observer began the observation work at a school, the teachers whose classes had been designated for opinion polls and self concept measures were notified and a schedule established. The schedule required approximately one hour during which the entire group of students in the class would be present. Usually, one of the two observers assigned to a school conducted the survey in each classroom.

The observer came to the classroom at the scheduled time, distributed the instrument forms to students, gave the instructions for one survey, and monitored the students' activities. The second instrument was then administered according to its instructions. Instructions and items were presented aloud for all children in the Fourth grade and below and also for all remedial classes. Teachers were asked to remain in the classrooms during these two student attitude assessments for classroom management purposes. Table 7 shows the sampling details for each school and program.

Table 7. Observer Assignments for Each Instrument at Each B.U.S.D. School or Program

Observer	School	Observations N	Attitude Scale N	Attitude Survey N
I	Cragmont	17	1	
	Emerson	14	1	
	Grizzly Peak	5	1	
	Hillside	12	1	
	John Muir	3	1	
	LeConte	12	1	
	Oxford	12	1	
	Muir, C.D.	18	1	
II	Thousand Oaks	21	1	
	Tilden	5	1	
	Washington	18	1	
	Whittier	17	1	
	Jefferson ESP	19	1	
	Early Lrn.C.	3	1	
	Kilimanjaro	3	1	
	Columbus	19	3	3
III	Franklin	22	3	3
	Franklin ESP	10	2	2
	Longfellow	27	2	2
	Malcolm X	24	3	3
	Malcolm X ESP	2	2	2
	King Jr. High	39	3	3
IV	Willard Jr.High	29	3	3
	West Campus	28	4	4
	West Campus ESP	10	3	3
	Odyssey	2	2	2
	Agora/Genesis	5	1	1
	College Prep.	8	1	1
	East Campus	12	2	2
	Model Sch. A	14	1	1
	School of Arts	5	1	1
	On Target	4	1	1
V	Berkeley High	68	8	8

• • Classroom Observation Instrument -- The three parts of the classroom observation instrument were applied to the classrooms of each B.U.S.D. basic skill teacher. Lists of basic skill teachers were assigned to observers during their training session. Observers worked in two-person teams at all but very small schools. They checked in with the school office each day before beginning observations. The total observation time for each classroom was 40 minutes; however, the total observation time could be accumulated from two or three shorter periods if interruptions so dictated. Because of the observers' very tight schedules, they were instructed to defer as many questions and general discussions of the study from teachers as possible to the core staff. They were also instructed to request that teachers not interrupt the normal classroom process because of their presence. It was hoped that observers could include themselves into the classroom in a manner that was as unobtrusive as possible and, once their presence was taken for granted, that they could even make nondisruptive movements or inquiries where necessary.

At the end of each week, classroom observers brought their scored observations and attitude surveys to Pacific Consultants' offices where they were checked in and reviewed by the data clerk. The data clerk then either coded them and passed them on to the computer key punch personnel, or conferred first with the observer about irregularities such as scoring problems or partial omission of identifying information.

- • Early Childhood Education -- The three supervising teachers of ECE were personally interviewed by one of the core staff members of the Evaluation Study. Each interview required approximately one hour. Subsequently, the ECE supervisors distributed the questionnaire to all staff in the Children's Center and Parent Nursery staff. The staff then completed this self administered form and returned it to the supervisors. Pacific Consultants collected the questionnaires when informed of their completion.

- • Adult Education -- The data was collected by interviewing the school's three administrators. The principal, vice principal, and supervisor of Basic Education were each interviewed by a core staff member for a period of two hours. Later, each administrator completed a descriptive chart on the school's program and returned it to Pacific Consultants by mail.

- ● Comprehensive Tests of Basic Skills and Cooperative Tests -- The achievement tests were administered to students in grades Kindergarten through Twelve by B.U.S.D. schools under the direction of the B.U.S.D. Research Department.

Data Reduction and Processing

The raw data obtained with each instrument required processing. At some stages this processing was done for quality control purposes (e.g., correcting arithmetic errors, filling all entries, etc.). Some processing was prerequisite to computer key punching and some processing was done to reduce or descriptively summarize the data. Table 8 below shows the basic method of processing for each instrument.

Table 8. Data Processing Methods for each Instrument

Instrument	Processing Method
Administrator Interviews	Manual
Principal Interviews	Manual
Teacher Surveys	Manual & Computer
Teacher Interviews	Manual
On-Site Classroom Observations	Manual & Computer
Student Attitude Scale & Survey and Achievement	Manual & Computer
Parent Survey	Manual & Computer

- Parent Surveys -- Parent surveys were prepared for computer key punch operations by the data clerk. Identifying information was checked for accuracy. A record was maintained of the identities of surveys returned relative to those not yet returned in order that a second mailing could be made to parents who had not returned their surveys by a particular date. In addition, many parents chose to write in comments about their views of B.U.S.D. and their direct experiences with the district. Many of these comments were quite lengthy. In order to utilize this wealth of information a content analysis of parents' spontaneous comments was performed. This was done manually by experienced data analysts. The categorical responses to survey items were processed by computer.

- Administrator Interviews -- Each interviewer was held responsible for preparing a legible record of the results of each interview. Following the completion of the entire interview schedule, conferences were held at which all interviewers presented the results of their administrator interviews within the framework of an outline of organizational, curriculum, and instructional methodology issues. In this way the descriptive data obtained from these interviews was synthesized and structured according to the research issues and objectives of the Evaluation

Study. In addition, one of the core staff then systematically combed the total grouping of administrator responses to each question for examples and verification of conclusions formulated in the conference.

- Principal Interviews -- The same data reduction and processing methods that were applied to the administrator data were also used with principal interview results. In addition, cross references between principal and administrator data were made for all major questions and issues.

- Teacher Surveys -- Teacher responses to the Teacher Survey were personally reviewed on an item by item basis by one of the core staff persons. When information was omitted or when responses were uncodeable due to a misunderstanding of instructions, the specific sections were copied, specific instructions written to the teacher, and then forwarded to the teacher for completion or revision. In cases of missing data, keypunching instructions were formulated and specified for the computer personnel. Analyses of the categorical responses were performed by computer. In several cases teachers included personal notations about their experiences and views. Pacific Consultants reviewed each of these for their relevance to the organizational, curriculum, and instructional issues being considered.

- Teacher Interviews -- The substance of the interviews with secondary teachers was first reduced by the interviewers themselves into a summary of approximately five pages. These summaries plus the primary data were given to the secondary curriculum specialists of the curriculum task force. Each specialist reviewed the data in his own domain and conferred with the interviewers. As a result, each specialist then formulated a comprehensive case study report.

- Student Opinion Poll -- The data processing and reduction procedures for the Student Opinion Polls were essentially the same as those of the Parent Survey. The data clerk verified identifying information for each, supplied any necessary computer coding, and then passed them on to be keypunched. The keypunched data was then used in all data analyses of Student Opinion Polls.

- Student Attitude Scale (SCAMIN) -- The SCAMIN was hand scored by the data clerks according to its publisher's directions. Each scale was also verified for identifying information and coded for computer keypunching. All analyses of the SCAMIN were performed by computerized procedures.

- Classroom Observation Instrument -- Data from each classroom observation was reviewed for recording and arithmetic errors, omissions, and inconsistencies. Any problems of this sort were resolved jointly by the observers and the data clerk. Coding instructions were then supplied and the data was keypunched for computer analysis.

- Early Childhood Education Surveys -- The ECE surveys and questionnaires were personally reviewed, analyzed, and summarized by the core staff member of the Evaluation Study who conducted the interviews.

- Adult Education Surveys -- The Adult Education surveys were personally reviewed, analyzed, and summarized by the core staff member of the Evaluation Study who conducted the interviews.

- Student Achievement Tests -- The CTBS scores were acquired in computerized form from the B.U.S.D. Research Department. These data were then analyzed by Pacific Consultants via computerized procedures.

RESULTS AND DISCUSSION -- PROCESS STUDY

Organizational Issues Related to Evaluation Study

Attitudes and Expectancies

Basic Skills Curriculum in B.U.S.D.

Instructional Methodology in B.U.S.D.

Early Childhood Education

Adult Education Program

Staffing Patterns

III. RESULTS AND DISCUSSION -- PROCESS STUDY

The procedures of the Evaluation Study produced the body of data which is organized, described and discussed below. Conclusions and recommendations inferred from these findings are presented in the SUMMARIZED CONCLUSIONS -- PROCESS STUDY section of the report (Refer to Page 574).

Organizational Issues Related to the Evaluation Study

The findings of the Evaluation Study relevant to B.U.S.D. curriculum and instructional methodology were affected by the organizational structure of B.U.S.D. and by recent administrative decisions. These factors have also had important formative influences on the ongoing curriculum and instructional processes in the district. The influences and the outcomes associated with them are discussed below.

- B.U.S.D. Current Status -- During the course of the study, a number of major decisions were made in the district. These decisions affect overall operations and are relevant to our findings, particularly in the areas of curriculum planning and content, articulation, and instructional methodology. In order to put the study in perspective and to assess how these decisions relate to our findings, it is necessary to review them before sections on research results are presented.

• • Grade Configuration Report -- The Education Planning and Grade Configuration Committee was charged with reappraising "...the present grade configuration in B.U.S.D. to determine what if any changes to that configuration would promote and enhance the educational program for Berkeley students."

While a host of other important issues were addressed, the grade configuration report was designed to improve articulation among schools and to minimize the social and psychological dislocation experienced by students as a result of moving from feeder to receiver schools. The Superintendent approved the Committee's majority recommendation for the Ninth through Twelfth Grade regrouping. However, extensive community and school site pressure, coupled with the difficulties posed by the earthquake program, led to a decision to keep the grade configuration essentially the same. Given this decision, the the Superintendent recommended that voluntary teacher rotation occur as an alternate strategy to improve articulation (beginning next year between Berkeley High School and West Campus). While there appears to be support for this strategy, no direct evidence was available to indicate that this approach would in fact be effective.

• • The New Organizational Structure -- The central administration staff was, to some extent, reorganized under the administration of the new Superintendent, Laval S. Wilson. A third Assistant Superintendent (Assistant Superintendent for Planning and Program Implementation) was added. It was planned that this person's prime responsibility would lie in the area of actual program operations at the site level. Responsibilities of the Assistant Superintendent for Curriculum and Instruction and the Assistant Superintendent for Business and Administrative Services remained essentially the same. Conceptually, this structure can be viewed as consisting of both *line* and *staff* positions. The Assistant Superintendent for Planning and Program Implementation serves on a line capacity responsible for operations while the other two Assistant Superintendents serve in a staff capacity responsible for supporting, but not directing, actual site operations.

Departments and personnel under each Assistant Superintendent are organized so that essentially each department and/or person reports directly to the Assistant Superintendents. This contrasts with a structure which lessens the Assistants' span of control. Figure 1 schematically presents this difference. Also, departments and personnel under

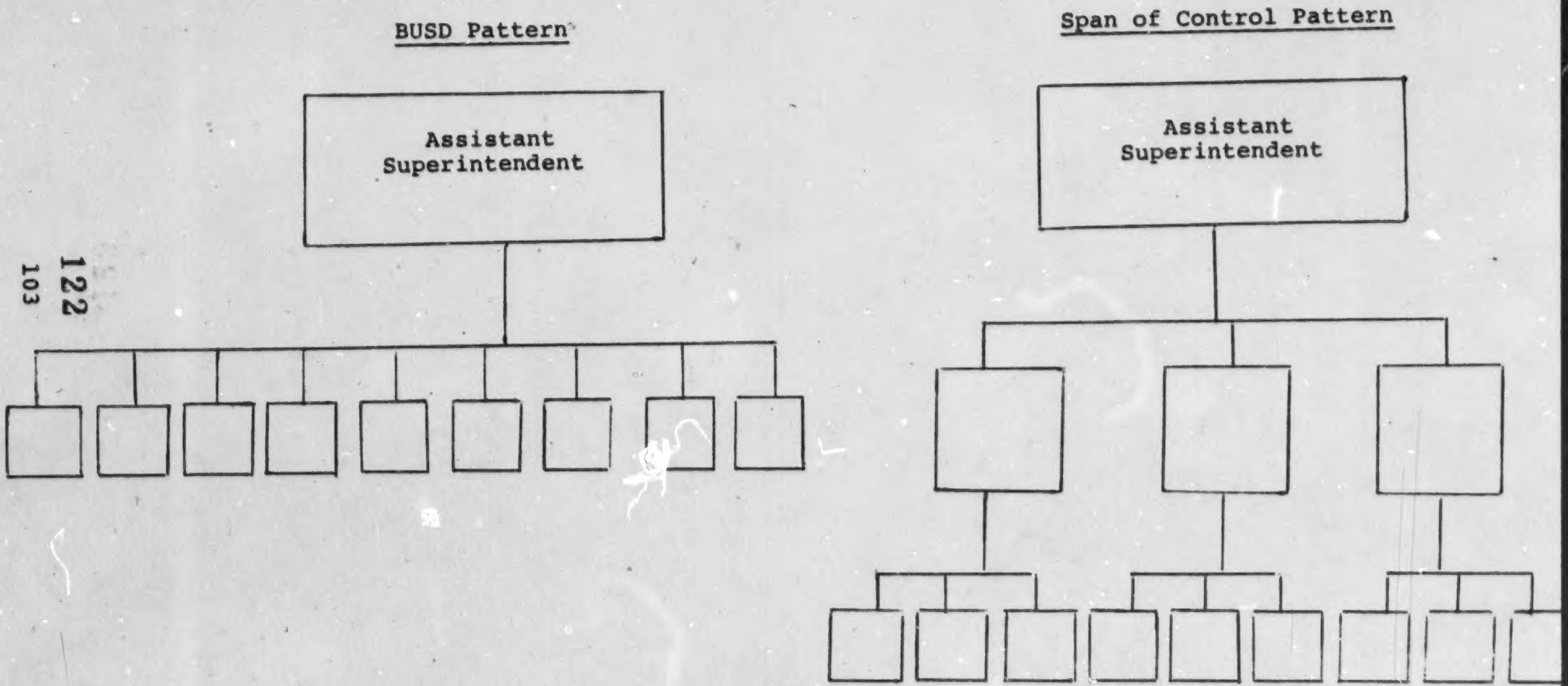

BUSD Pattern
Assistant Superintendent
Span of Control Pattern
Assistant Superintendent

Figure 1. Organizational patterns for departments and personnel.

each Assistant Superintendent are organized on *both* a program and functional basis, as opposed to a more differentiated approach which might organize on one basis or the other. Figure 2 presents the Berkeley organizational pattern and compares it to a strict functional pattern and a strict program pattern.

● ● The 1975-1976 Policy Statement -- The policy statement which was adopted by the Board of Education includes several goals which are directly relevant to the study: 1) the district has adopted individualization as an instructional goal for all grades. However, no specific, operational definition is provided; 2) the need to teach basic skills at all levels is emphasized. However, here also, a clear definition of basic skills is not provided, and groups targeted for basic skill instruction have not been identified; 3) the district has established, as a priority, the implementation of a district-wide reading plan as the first step in improving curriculum articulation. In all three areas, the need for intensive teacher training has been identified as an essential step toward the effective implementation of these policies.

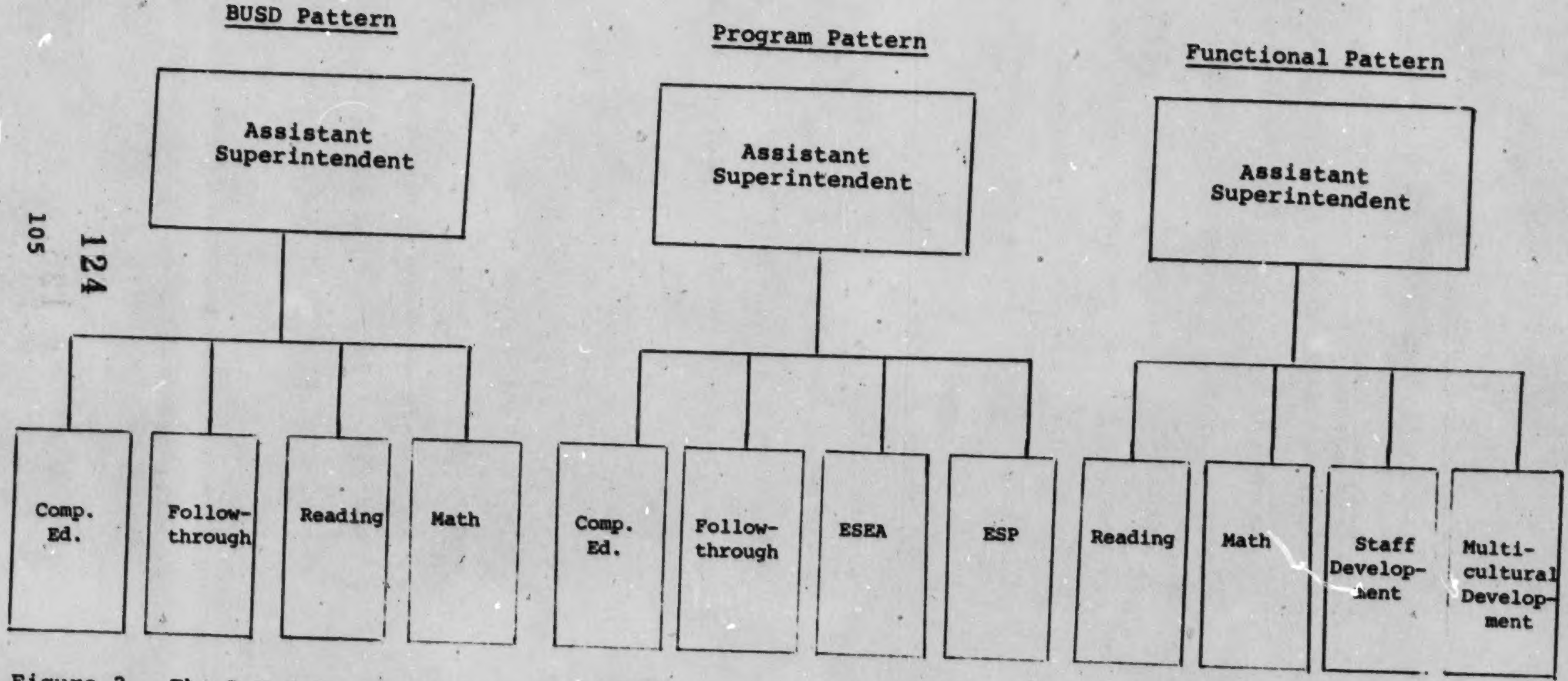

BUSD Pattern
Assistant Superintendent
Comp. Ed.
Follow-through
Reading
Math
Program Pattern
Assistant Superintendent
Comp. Ed.
Follow-through
ESEA
ESP
Functional Pattern
Assistant Superintendent
Reading
Math
Staff Development
Multi-cultural Development

Figure 2. The B.U.S.D. organizational pattern relative to program- or function-based patterns.

• • The Reading Task Force -- Consistent with the district's 1975-1976 Policy Statement, B.U.S.D. this year constituted a task force of administrators, skill specialists and teachers to develop a reading management system for the elementary grades. The task force initially reviewed the systems that are currently being used in the district and others that had been recommended for potential use. The reading systems considered included: 1) PIRAMID, a management system currently used in elementary schools containing the Compensatory Education Program; 2) basal readers, 3) High Intensity Learning (HIL), a reading system initially adopted and modified by ESP that is now being used in many schools especially for remedial purposes; 4) the Hempstead Plan, a management system for Kindergarten through Twelfth grade; 5) the ESP Reading Project; and 6) the ESP Human Development approach.

The timetable of the Reading Task Force requires that a plan for all elementary grades be specified by the end of the 1974-1975 academic year, with implementation as a pilot project in the 1975-1976 academic year. The project will be supported by in-service training. This effort represents the district's primary strategy for addressing the perceived need for improved basic skill plans and articulation.

- • Administrative Cutbacks and Federal Program Consolidation -- In an effort to reduce costs and to simultaneously coordinate the programs which are funded by external sources, the district has decided to fill a maximum of forty classroom teacher vacancies with support personnel such as psychologists, counselors, music and art staff, skill specialists, and prep-time teachers. Additionally, the district is contemplating the elimination of eight central staff positions by consolidating the Compensatory Education Program, Follow Through, and the Early Childhood Education Program. While the B.U.S.D. Evaluation Study was not designed to address budget and personnel issues directly, the fiscal decisions that occurred in the district this year are important to our findings on curriculum and instructional operations.

- Evaluation Planning in B.U.S.D. -- The Evaluation Study was burdened by the number of organizational problems related to the District's need for planning and coordination of evaluation studies. At least six studies were conducted during the 1974-1975 academic year which often involved overlapping research problems and participant samples. Staff attitudes at the site level, in no small way influenced by the number and scope of studies undertaken during the school year, were in great part negative toward Pacific Consultants' B.U.S.D. evaluation project.

These attitudes were expressed both towards the evaluation process and towards the additional paper work which was necessarily involved.

The combined effect of disparate, overlapping evaluation studies, and negative staff attitudes created situations which at times during the field work were not only unpleasant for observers and interviewers, but which wasted valuable research time. These circumstances made it difficult to obtain comprehensive and reliable data through interviews. These staff attitudes also markedly affected the return rate of the Teacher Survey and the work load related to the data collection phase.

Berkeley is a district which for some time, has had numerous studies occurring simultaneously. The district's receipt of a considerable amount of State and Federal funding has significantly contributed to this because government funding, while fostering educational innovation, often requires evaluation research. Evaluations conducted this year included district as well as mandatory State and Federal studies. Federal and State required studies included: 1) the ESP Level I Evaluation; 2) the ESP Level II Evaluation; 3) the Compensatory Education Evaluation; and 4) the smaller ESAA Evaluation. The district sponsored the following studies: 1) the USER Evaluation; 2) the Stull Bill Evaluation; and 3) the district-wide B.U.S.D. Evaluation Study.

The potential in this district for research overlap and duplication resulting from external funding alone, is substantial. While the specifications of State and Federal guidelines concerning accountability of educational programs is a major part of the problem, the district's organization structure is a critical factor. Specifically, this district has a policy of program integration at the site level, though not at the administrative level. This means that projects, most of which serve a common population, are separately administered. Therefore at the site level, schools receive multiple funding and in turn are responsible to several different projects. Each one conducts its required evaluations independently and without coordination. In the district there are some schools which house as many as three projects. Cragmont, for example, receives funding from Project Follow Through, Compensatory Education, and Early Childhood. Jefferson receives Compensatory Education and ESP funds. Even though this pattern of multiple funding occurs most frequently at the Kindergarten to Third grade level, it is a recurring pattern throughout the grade levels. Most B.U.S.D. schools receive funds from at least one government project.

The above description of the district's current research activities is indicative of the extent to which research duplication can occur in the absence of planning and coordination. With what appears to be a trend in educational accountability, the demand for evaluation can be expected to increase. This ever increasing interest in evaluation studies by programs and program sponsors demands a systematic approach to evaluation planning and implementation in order that contract compliance and accountability can be assured without over-burdening either students or staff.

The duplication of research design and participant samples which occurred in the district this year tempered staff receptivity of the B.U.S.D. study. Site level staff attitudes toward the study was, in general, negative. These reactions seemed to revolve around four concerns: 1) that the evaluation was an ineffective use of money, especially in view of current monetary problems; 2) that the evaluation was intended as an intelligence gathering operation to be used in making personnel decisions; 3) that site level staff had not been involved in the planning phase; and 4) that previous evaluation had provided no site level feedback. Many teachers felt that the evaluation funds should have been used in the classroom to reduce the teacher/student ratio, and that the staff time demanded by teacher surveys should have been used for classroom preparation. Confidentiality, a professional commitment of Pacific Consultants, was considered by some B.U.S.D. staff members to be meaningless. There was concern among the staff that the information gathered during the study would be used to make personnel decisions. In addition to Pacific's agreement to keep the data confidential, the research questions which the company was contracted to answer were structured in a manner which was compatible with the anonymity of teacher data. The Evaluation Study was not designed to evaluate teachers nor teacher effectiveness. Furthermore, the individual teacher was not a unit of analysis.

The need for formal feedback was a concern that was widely expressed by site staff. The actual provision of formal feedback at the close of the evaluation study should alleviate at least some of the suspicions about the purpose of the study. In a general way, dissemination of the evaluation findings could improve staff receptivity to evaluation research.

While the staff complained on the one hand of being over-burdened by the evaluation, they were equally concerned that they had not been involved in the formulation of the research objectives and methods. In many instances they were unaware that the Board and the Superintendent had formulated the research objectives and selected Pacific Consultants to conduct the study.

- Organizational Issues Related to Curriculum and Instructional Methodology -- During the interviews with principals and school district administrators, several organizational issues emerged which affect both curriculum and instructional planning. One of these issues related to a perceived conflict between school autonomy and flexibility as opposed to district-wide coordination. Other issues concerned the roles of school and district administrators and the impact of Federal and State programs upon school operations. These issues appear to be important to school personnel and to the success of any effort to coordinate curriculum and/or instruction.

- School Site Autonomy Versus District- Wide Coordination -- School principals feel that, historically, schools in Berkeley have maintained a strong sense of independence and a reputation for providing quality education. School principals, especially in the elementary schools, also feel that their school programs need to be improved. They tend to feel that in basic skill areas, such as reading and math, this improvement will involve better coordination of reading and math programs within and between schools and that outside assistance may be needed to develop these improved reading and math programs within the school.

  While school principals recognize the need for better between-school coordination and the need for outside assistance in developing their own basic skills curricula, they also feel that the central administration does not have the schools' best interests at heart. They feel that many district-wide policies relate more to the needs and politics of the school district than to the needs of the children. Moreover, the schools want to avoid being forced to make certain changes while at the same time they desire the coordination of reading and math programs.

The conflict in the minds of school principals between the desire to coordinate basic skills curricula and the desire to avoid school district mandates arose many times in interviews with principals. Many principals felt that district coordination should focus on curriculum goals in reading and math. They also felt, however, that both principals and teachers do not want to be told what instructional methods to use. Principals felt that the teacher's own personality and style ought to be maintained, even if this is a traditional but effective teaching style. Several principals mentioned specifically that they did not want to have a certain approach to individualization mandated for all teachers.

In general, the expression of need for district-wide coordination was more prevalent among elementary school principals than among secondary school principals. Principals implied a greater need for coordination in basic skills (reading and math) than in other curriculum areas. Principals also suggested that coordination of curriculum goals in reading and math was much more acceptable to principals and teachers than were mandates about which instructional methodology should be used.

● ● District Support of School Programs -- Several of the Assistant Superintendents of B.U.S.D. seem to interpret part of their administrative role as that of mandator of certain educational practices within the district. Another Assistant Superintendent sees his role as a supporter of curriculum development and an approver of Federal and State programs. In short, the central administration, especially the Assistant Superintendents, play a mixture of roles, some of which are in the style of mandating change or educational practice while others assume the role of supporting and facilitating educational programs at the local schools.

Regardless of the role perceptions that central administrators hold for themselves, school principals see the role of these central administrators as being almost exclusively in the style of mandating educational practices. School principals reported that this had several effects upon their activities as principals. First, school principals often stated that they call on the central administration for help as little as possible. Some principals stated this position more strongly; i.e., they said that they avoided the central administrators as much as possible. Secondly, school principals tended to see the communication pattern between principals and the central administration as being communication in only one direction, from the top down. Principals felt that there was no adequate communication system for expressing their concerns and needs upward to the central administration. However, their concern went far beyond a communication system. It was clear that principals were often hesitant to express their concerns and needs because of their perception of the roles of the central administrators.

Another dilemma emerged from administrator and principal interviews which is also related to the working relationships between these two administrative levels of the B.U.S.D. Central administrators felt overburdened with district-level tasks such as the many reports which must be sent to State and Federal agencies. School principals, on the other hand, felt that the central administrators did not spend enough time at the school sites. Consequently, some principals questioned how the central administrators spent their time and, in the absence of information, assumed that central administrators could be providing more assistance to schools than is currently the case.

It was evident that most principals felt that they were receiving little help from the central administrators in developing curriculum or instructional methodologies at their schools. When principals were asked what help they had received from the district in developing formal curriculum plans in basic skill areas, most principals reported they received very little, if any, help from the district. Similarly, when asked what services they had received from the district in developing new instructional methodologies, the answer was, again, very little help. Often, principals would ask the interviewer what was meant by *the district*. Their question seemed to be based on their differentiation between special programs such as ESP or Compensatory Education and the program development services that the schools received from the central administrators; i.e., *the district*. Thus, principals' estimate of administrative support for their schools' programs is affected by their perception of administrative functions and responsibilities. These in turn are impacted by the degree and nature of communication between central administrators and principals.

- Special Programs -- Principals often were very positive about the help that they received from the special programs. Principals mentioned several types of program development services. First, they valued the skill specialists who worked in the schools and provided curriculum materials, instructional techniques and special teaching services. They also valued the help of particular individuals from the central offices of the special programs (e.g., Pat Tanabe of ESP) who have helped schools develop such things as HIL centers or special ethnic programs. Thirdly, the principals valued the instructional materials made available by ESP or Compensatory Education money. In fact, many principals expressed fears that obtaining new materials or maintaining them in good condition would become very difficult once the funding for ESP has ended. Finally, many principals valued the comprehensive curriculum plans and management systems that have been made available through Compensatory Education. To summarize, the types of assistance which principals received from the special programs included: 1) skill specialists and other support personnel at the local school level; 2) assistance from individuals in the central offices of the special programs; 3) instructional materials; and 4) comprehensive curriculum plans and management systems. These services were received and valued at the secondary schools as well as at the elementary schools.

Several observations can be made about the pattern of support to local schools that has been described above: 1) the support included staff resources in the local schools, consultant help from the district, instructional materials, and curriculum plans and management systems. This represents a wide variety of support services; 2) this support was provided, for the most part, at the school level as opposed to, for example, curriculum coordination between schools or an instructional materials center which serves all schools and is located away from the local school site; and 3) a variety of centralized groups appear to be providing similar support services and these groups are organized at the central level by program rather than by function. For example, Compensatory Education, Follow Through, ESP, and other programs are all trying to provide similar services to schools. In fact, they often address the same problems, have similar objectives, and apply similar strategies. This results in a duplication of services from a district-wide perspective but also a confusion on the part of local school personnel as to whom to turn to for assistance.

- Conclusions -- In terms of overall organizational structure and communications and their relation to curriculum, instruction, and evaluation, the following conclusions and recommendations are made:
  - The district, i.e., the central administration, currently is organized on both a programmatic and a functional basis, with poorly defined lines of authority and communication within the central office and between the central office and individual sites. This structure results in a duplication of services to sites, and inefficient reporting in the central office. Because of these problems, the district should consider various methods of reorganizing. For example, the central staff could be re-

organized on either a strictly program basis or on a strictly functional basis. Pacific Consultants sees several advantages to the latter alternative. This would result in a further consolidation of some projects which have overlapping functions, a process already begun by B.U.S.D. Additionally, the evaluation results point out the need for a more efficient reporting system within each Assistant Superintendent's office, so that not all individuals report directly to their respective Assistant Superintendent.

Such a function orientation to district level organization would help improve the district organization chart where, currently, approximately thirty persons report directly to Lawrence Wells. A function-oriented staff organization would organize staff in a more effective hierarchy with corresponding improvements in accountability and delegation of responsibility. This staffing arrangement would also make it easier for local school personnel to locate and obtain appropriate support assistance from the district.

The current pattern of the delivery of support services, as seen by principals, also was highly dependent on help from specific individuals at the district level and was provided on an informal, sporadic basis. Many principals appreciated this assistance, but wanted it on a more systematic, continuous basis.

- Secondly, the central administration and site administrators should consider improving communications and give a better understanding of each other's perceptions, roles, and responsibilities. The current level of antagonism between site staff and central administration (which, to some extent, may be avoidable) needs to be reduced, since it clearly does not lead to more effective educational programs.

- Finally, the district should consider a much more systematic evaluation planning program. Just as with coordinating curriculum, a total evaluation plan should be developed on an annual basis, so that duplication of objectives, overburdening of participants, and inefficient use of funds is minimized. While it is recognized that most of the Federal and State projects require individual evaluations, B.U.S.D. can take a more innovative stance in fulfilling these requirements, by developing a more systematic mechanism for including B.U.S.D. staff in the planning of evaluation studies. While this has been done in the past and has met with problems, a mechanism of some type is needed to get staff involved at the inception of evaluation studies, both to obtain technical input and to insure their support.

Attitudes and Expectancies

One of the major tasks of the Process Study of the B.U.S.D. Evaluation Study was to measure parent, student, and teacher attitudes and expectancies toward the school district. The Parent Survey, the Teacher Survey-Part I, and the Student Poll-Part I measured expectancies; i.e., the expectations of these participants toward a series of child-focused and parent-focused services which one might expect a school system to provide. In addition, the Student Opinion Poll-Part II measured students' attitudes toward their instructional settings and the SCAMIN assessed students' Academic Self Concept and Academic Motivation.

The purpose of the parent, teacher, and student expectancy surveys was to measure the extent to which these groups felt the current level of service, both quantitatively and qualitatively, was meeting their expectations for any particular area. Accordingly, for each service identified, respondents were asked to determine if the service *needs much more attention, needs more attention, is okay as is, or needs less attention.* This set of responses provided a continuum of perceived fulfillment for each service. Specifically, an *okay as is* response implied that the current level of service was sufficient both quantitatively and qualitatively, that no improvement was needed, and that the participants were satisfied or that their expectations were being met. A *needs more attention,* or *needs much more attention* response implied that the current level of service was not sufficient, and that improvement was needed in order to match participant expectations. Clearly, the *needs much more attention* response indicated a more intense perception that improvement was needed than did the *needs more attention* response. Finally, a *needs less attention* response implied that the district was stressing this area too much and that quantitatively less emphasis should be placed on it. Thus, the response categories represented a hierarchy of perceived need for attention or investment of effort. The dominant response given to an item is indicative of where respondents felt the item should be placed on this need-for-attention hierarchy. For example, items receiving a high percentage of *needs much more attention* ratings would reflect a large discrepancy between participant expectations and the perception of the quality or quantity of actual services. From a policy perspective, then, the services which participants felt needed much more attention are those with which they were relatively dissatisfied and which, therefore, need to be improved.

To analytically discriminate between expectancy responses, the responses were dichotomized into *needs much more attention* and *other* categories for some analyses. This was done, since *needs much more attention* was viewed as representing substantially more dissatisfaction or need perception than the other categories.

Given the above framework, the following section presents the findings of the Parent Survey, the Teacher Survey-Part I, the Student Opinion Poll--Parts I and II, and the SCAMIN in terms of 1) the distribution of overall results, 2) comparisons among specific groups in order to identify differences of degree and kind between groups, and 3) the rank order of expectancies for improvement or attention.

- Parent Expectancies - Results and Discussion -- The parent expectancies survey was mailed to 2,400 parents. Parents were randomly selected according to a stratified design with strata for parents of primary students, of secondary students, of ESP students, and of Non-ESP students. In addition, each parent's questionnaire was identified with the race, school, and ESP/Non-ESP participation of the parent's child. The final questionnaire items asked each parent to report parent education level and degree of involvement with B.U.S.D.

  Parents returned a total of 1,163 surveys which yielded a 48% response rate. The distribution of respondents is presented in Table 9. The sample is highly representative on the basis of parents with children in primary and secondary grades and ESP and Non-ESP schools. The sample is believed to be somewhat skewed in terms of parent education and the number of parents for each of the student race categories. The parents of White children are known to be over-represented (10.5%) and the parents of Black children were under-represented (13.8%)

Table 9. Demographic Analysis of Parent Survey Respondents

Demographic Characteristic	Percent of Respondents	Percent in B.U.S.D.
Child's Race		
American Indian	.2	.1
Asian	9.9	6.0
Black	29.9	43.7
Caucasian	55.8	45.3
Chicano	2.4	3.4
Other	1.8	1.5
Child's Program		
ESP	32.6	
Non-ESP	67.4	
Child's School Level		
Elementary	52.5	
Secondary	47.5	
Parent Education[1]		
Less than Highschool Attendance	1.3	13
Highschool Attendance	2.3	29
Highschool Graduation	6.7	--
College Attendance	18.4	18
College Graduation and Post-Graduate Education	71.4	40
Parent Involvement in B.U.S.D.		
Active	13.5	
Moderately Active	50.2	
Inactive	36.3	

[1] Percent in B.U.S.D. is only inferred on the basis of 1970 U.S. Bureau of the Census Data for the City of Berkeley

relative to B.U.S.D. enrollment data. Parents of Asian students were slightly over-represented (3.9%) and parents of Chicano students slightly under-represented (1.0%). Parents of American Indian and *other* racial or ethnic types of students were represented in a manner highly similar to their B.U.S.D. enrollment. On the basis of 1970 census data in the city of Berkeley, it is estimated that parents with college degrees and post-graduate education are over-represented, that parents with college attendance are suitably represented, and that parents with all other levels of education are considerably under-represented. For a number of reasons, this interpretation of the representativeness of parent education level can only be viewed as a very rough approximation. There are no direct data on the socioeconomic characteristics of B.U.S.D. parents, and, since the distribution of Berkeley residents across education levels may be very different than the distribution of B.U.S.D. parents, census data is not a very satisfactory substitute. Nevertheless, the magnitude of the percentage of college graduates and post-graduates relative to census figures makes the bias obvious. While it is impossible to eliminate the biases for student race and parent education, they are taken into account in the discussion of results.

The results of the Parent Survey are presented for the total group of respondents as well as for the various demographic and school variables delineated in Table 9. Frequency distributions as well as rank orders are analyzed for all survey items.

• • All Parent Respondents -- Table 10 presents a frequency distribution for each item for all parents and Table 11 presents a rank order of the items based upon the percentage of parents who responded to the *needs much more attention* category. For 5 of the 22 services for children and 6 services for parents, 60% or more of the parents indicated more or much more attention was needed. For 4 of the total list of services over 60% of the parents indicated that the service was either *okay* or needed less attention. Those frequently cited as needing attention included: 1) offer a safe, secure school environment (71.2%); 2) develop good study skills (71.1%); 3) develop each child's desire to continue learning throughout her or his lifetime (70.8%); 4) prepare students for getting a good job after high school (67.9%); and 5) provide each child with a sense of responsibility for her or his own actions (60.5%).

Those services frequently cited as being satisfactory or needing less attention included: 1) give opportunities for parent participation in the classroom (73.6%);

Table 10. Distribution of All Parent Survey Responses in Percentages

Items	*NEEDS MUCH MORE ATTENTION* Percent	*NEEDS MORE ATTENTION* Percent	*OKAY AS IS* Percent	*NEEDS LESS ATTENTION* Percent
Services to Students				
1. Give effective instruction in language arts skills such as reading, writing, speaking, and English	25.8	33.4	40.1	.7
2. Provide effective instruction in mathematics.	20.5	34.1	44.7	.7
3. Give effective instruction in science.	17.9	37.1	44.5	.5
4. Provide effective instruction in social studies.	10.8	32.2	54.8	2.2
5. Offer opportunities in creative subject areas such as art, music, and drama.	16.1	27.0	54.9	2.0
6. Help students develop physically through activities such as physical education, intramural sports, and competitive school teams.	10.3	20.2	63.8	5.6
7. Prepare students for going to college.	24.3	35.0	38.6	2.2
8. Prepare students for getting a good job after high school.	30.0	37.9	29.2	3.0
9. Give each child a good feeling about her or himself as a worthwhile person.	22.1	32.2	44.0	1.7
10. Provide each child with a feeling that she or he is capable of learning.	22.2	32.0	45.1	.7
11. Give each child a good feeling about her or his own cultural background.	16.8	25.0	48.6	9.6
12. Help students respect and understand people of all races and cultures.	18.6	26.2	49.8	5.4
13. Develop each child's ability to cooperate with other people.	17.2	33.1	48.3	1.4
14. Develop good study skills.	30.7	40.4	28.5	.4
15. Develop each child's desire to continue learning throughout her or his lifetime.	29.8	41.0	28.7	.5
16. Provide each child with a sense of responsibility for her or his own actions.	25.2	35.3	38.3	1.2
17. Teach students to be concerned about the things that all people in our society need.	17.3	34.1	45.6	3.0
18. Develop good personal health and hygiene habits.	13.8	24.5	58.3	3.3
19. Teach children to obey rules and regulations.	21.7	24.8	47.1	6.4
20. Support the ideals of a child's home and family.	10.4	20.3	63.0	6.3
21. Offer a safe, secure school environment.	36.1	35.1	28.3	.5
22. Offer enjoyable experiences while in school.	17.5	30.6	49.4	2.6
Services to Parents				
1. Give opportunities for parent participation in the classroom.	5.4	21.0	67.7	5.9
2. Provide useful information about your child's progress.	16.0	32.9	50.1	1.0
3. Involve parents in decisions about selecting school personnel.	15.5	29.6	46.0	9.0
4. Involve parents in decisions about selecting curriculum and instruction.	16.0	36.1	41.1	6.8
5. Enable parents to choose their child's teachers.	16.6	30.7	43.6	9.1
6. Let parents know about opportunities for enrollment in special programs within the school system.	23.8	36.1	38.7	1.3

Table 11. Rank Order of Services Perceived as Needing Much More Attention by All Parent Survey Respondents

Items	Rank	NEEDS MUCH MORE ATTENTION Percent
Offer a safe, secure school environment.	1	36.1
Develop good study skills.	2	30.7
Prepare students for getting a good job after high school.	3	30.0
Develop each child's desire to continue learning throughout her or his lifetime.	4	29.8
Give effective instruction in language arts skills such as reading, writing, speaking, English.	5	25.8
Provide each child with a sense of responsibility for her or his own actions.	6	25.2
Prepare students for going to college.	7	24.3
Let parents know about opportunities for enrollment in special programs in the school system.	8	23.8
Provide each child with a feeling that he or she is capable of learning.	9	22.2
Give each child a good feeling about her or himself as a worthwhile person.	10	22.1
Teach children to obey rules and regulations.	11	21.7
Provide effective instruction in mathematics.	12	20.5
Help students respect and understand people of all races and cultures.	13	18.6
Give effective instruction in science.	14	17.9
Offer enjoyable experiences while in school.	15	17.5
Teach students to be concerned about the things that all people in our society need.	16	17.3
Develop each child's ability to cooperate with other people.	17	17.2
Give each child a good feeling about her or his own cultural background.	18	16.8
Enable parents to choose their child's teachers.	19	16.6
Offer opportunities in creative subject areas such as art, music, and drama.	20	16.1
Provide useful information about your child's progress.	21	16.0
Involve parents in decisions about selecting curriculum instruction.	22	16.0
Involve parents in decisions about selecting school personnel.	23	15.5
Develop good personal health and hygiene habits.	24	13.8
Provide effective instruction in social studies.	25	10.8
Support the ideals of a child's home and family	26	10.4
Help students develop physically through activities such as physical education, intramural sports, and competitive school teams.	27	10.3
Give opportunities for parent participation in the classroom.	28	5.4

2) help students develop physically (69.4%); 3) support the ideals of a child's home and family (69.3%); and 4) develop good personal health and hygiene habits (61.6%). Parent expectancies for all other items appeared to be rather evenly divided between perceptions of needs for improvement and perceptions of the services as being satisfactory.

Expectations related directly to the instructional areas of language arts, mathematics, science, social studies, and creative subjects (items 1 through 5) varied from the low of 16.1 % of parents who wanted much more attention given to the creative subject areas to a high of 25.8 % of parents who wanted much more attention for language arts skills.

Expectations related to future outcomes such as preparation for college or jobs (items 7, 8, 14, 15) varied from a low of 24.5 % of the parents wanting much more attention given to preparation for college to a high of 30.7 % wanting much more attention given to the development of good study skills.

Expectations related to personal and social development and to school environment (items 6, 9-13, 16-22), varied from a low of 10.3 % of parents who wanted much more attention given to physical activities to a high of 36.1 % of the parents who wanted much more attention given to the provision of a safe, secure environment.

Finally, expectations related to services for parents such as parent participation, communication with schools (items 1-6, Part II), varied from a low of 5.4% who wanted much more attention given to opportunities for parent participation in the classroom to a high of 23.8% of parents who wanted a high degree of attention given to informing them about special programs for their children.

The foregoing data suggest that parents felt that improvement is needed in five service areas provided by the district. Parents seemed to be especially concerned about improving services directly related to their child's future such as getting a job, developing long range learning attitudes, or going to college. The need for improvement in that area was followed by perceived needs in the services directly related to academics, to personal and social development, and finally, to parent-related services.

While these priorities pertained to the four broad categories above, a more specific identification of priorities can be assessed by reviewing the rank order of the twenty-eight items as presented in Table 11. The rank order of the twenty-eight items indicates the following: first, offering a safe, secure school environment was the highest priority with 36% of the parents wanting much more attention given to this service. The next three priorities addressed good study skills, good jobs after high school, and preparation for lifelong learning. These all relate to the future patterns and behavior of children, suggesting that parents were concerned about the effectiveness of

B.U.S.D. in preparing their children for the adult world. Second, of the direct academic services, only the provision of effective reading and language arts was ranked among the top ten items, suggesting that the provision of math, science and social studies instruction was considered relatively closer to expectation than was reading and language arts instruction. Finally, informing parents about special programs is the only parent related service that was ranked among the top ten items.

In addition to the analyses of categorical responses to the survey, the multitude of spontaneous, open-ended comments was examined. Table 12 presents the content analysis of these comments by rank order and frequency. The content descriptions are paraphrased versions of the actual comments.

ESP and Non-ESP Parent Groups -- The frequency distribution of responses for ESP and Non-ESP parents is presented in Table 13. For the following 4 of the 28 services to children and parents, over 60% of the ESP parents expressed the perception that more attention was needed: 1) develop good study skills (73.2%); 2) prepare students for getting good jobs after high school (70.6%); 3) develop each child's desire to continue learning throughout her or his lifetime (70.6%); 4) offer a safe, secure school environment (69.0%). More than 60% of ESP parents identified

Table 12. Rank Order of Spontaneous Comments on Parent Attitude Survey

CURRICULUM AND INSTRUCTION	Rank	Number of Parents
Teachers lack warmth/Don't care about children/Are apathetic Teachers are inflexible/Dull/Ineffective Not enough personal care and attention from teachers or counselors School is too impersonal/Learning is forced and regimented	1	44
There should be more emphasis on basic skills/More basic skills programs Academic Standards/Expectations are too low Should be more accent on Academics	2	37
Reduce Competitiveness There is too much accent on skills achievement/Too much pressure Too much emphasis on test results/grading Should be more non-competitive activities	3	28
Teachers are too loose, they should be stricter Too much permissiveness/Discipline should be stressed Demand more structure and accountability from students Enforce and teach rules and regulations	4	24
There should be more emphasis on Art/Music/Drama/Dance/ Creative Programs	4	24
There should be more personal freedom for students Structure is too rigid, cold and controlled More independent study opportunities needed Let students choose electives, classes more	5	23
Curriculum is uninteresting/Students are not stimulated Materials/Texts are irrelevant State Texts are rotten	6	20
There should be more emphasis on Language Arts Skills/Writing/ Grammar/Presentation of Ideas	7	19

CURRICULUM AND INSTRUCTION (Continued)	Rank	Number of Parents
Develop a comprehensive curricula There is a lack of continuity and curriculum co-ordination There is too much experimentation/diversity/"hit and miss education" Too many teachers doing their own thing/no systematic education	8	13
There should be more emphasis on Career Exploration/ Vocational Training	9	10
There should be more homework	10	9
Study habits/skills not developed adequately	11	7
There should be more emphasis on History, especially European History	11	7
Curriculum has too little to do with ones feelings More human relations in the curriculum	11	7
There should be more emphasis on Basic Survival, Trade and Technical Skills (Gardening, Carpentry, etc.)	12	3
There should be more emphasis on Urban Survival Skills (Job-Hunting, food shopping, etc.)	12	3
RACE AND SEX The emphasis is on Black, Asian, Chicano cultures - others are ignored Too many Black Studies courses/Studies should be cross-cultural for all White students are taught racial shame/guilt White students are not taught to have pride in their race "White, professional family values" are neglected There is racial discrimination in favor of Blacks	1	41

RACE AND SEX (Continued)	Rank	Number of Parents
Relationships are polarized along racial lines Alleviate racial tensions/not being dealt with openly, honestly, or creatively Integration is failing	2	10
Reduce sexism in the classroom Textbooks are sexist	3	9
Girls are not aggressively encouraged in sports There is no Girls P.E., Sports	4	7
Impressed with the multi-cultural diversity of schools	4	7
SAFETY		
The schools are not safe Extortion, rough behavior, bullying, mugging, gang fights outrageous/should be stopped Things stolen from lockers	1	41
There should be more supervision (playground, lunch-time,etc.)	2	17
Rough behavior is overlooked or taken for granted by teachers, yard supervisors	3	4
PARENT INVOLVEMENT		
Would like to participate but work full-time, am student, ill,etc.	1	27
Teachers make too little contact with parents Parents are being discouraged from participating Teachers resist talking to parents Parents aren't listened to/"Tried to make contact, only to talk to walls"	2	24

PARENT INVOLVEMENT (Continued)	Rank	Number of Parents
Parents aren't informed of what's going on at schools Would like to participate, but have trouble finding out how Would like more letters/schedules of events Programs for parent participation should be started More parent/teacher conferences should be scheduled	3	23
Would like to participate All parents should participate	4	14
School Board will not listen to Parents Superintendent refuses to talk to Parents	4	14
Parents should have more say in teacher selection Parent selection of teachers has been very valuable	5	8
Parent involvement in classroom not generally necessary or desirable Parent involvement would embarrass child	6	7
Parent selection of personnel is not desirable	7	5
DISTRICT OPERATIONS		
Decrease classroom size There are too many students per teacher Put certificated non-teachers, administrators back into the classroom Reduce schools to smaller administrative units with same amount of space	1	55
Too much money spent on administration There are too many administrators Spend more money in the classroom itself	2	47
Good teachers are the single most important educational factor	3	34

DISTRICT OPERATIONS (Continued)	Rank	Number of Parents
The schools are ugly/There is litter and lack of maintenance/ Cafeterias and bathrooms are filthy School sites/facilities are inadequate	4	29
Should be more classroom aides/resource and skills specialists More tutors for slow learners More special programs/learning centers	5	19
Provide more continuity from early to later elementary schools and high schools 4-6 schools are much worse than K-3/No excitement or positive reinforcement	6	18
Design a mechanism to dismiss poor teachers Revise tenure system so that poor teachers can be dismissed	7	10
Teachers are overworked/underpaid Lack of on-site administrative and morale support for teachers School Board failure to support teachers	8	9
Alternative schools are best/Provide more personal attention, choices	8	9
Reduce number of holidays Too many days off	9	7
More bi-lingual programs	10	5

SURVEY REACTIONS	Rank	Number of Parents
Survey is a waste of time and/or money	1	47
Questions are irrelevant/meaningless This is a poorly made questionnaire The survey asks the wrong questions	2	46
Answers vary depending on program/school/grade level/teacher Questions are not appropriate for grade level of particular child Experience is limited to one particular school or program	3	40
Want less paperwork, theory, administration Have already filled out too many questionnaires Work with children directly/Ask them	4	24
Don't know how to answer the questions Questions are vague or misleading "Who am I evaluating? - Purpose of survey?"	5	22
Evaluation should be handled by BUSD Administration, not by outsiders This questionnaire/evaluation is an abdication of administration responsibility	6	9
Questions in Parts 3 and 4 are irrelevant/improper/none of your business The educational background of parents is not relevant to their opinions on child's education	7	5
Both parents should have been given an opportunity to respond	8	4

Table 13. Distribution of All ESP and Non-ESP Parent Responses in Percentages

Items	ESP				Non-ESP			
	Needs Much More Attn. Percent	Needs More Attn. Percent	Okay As Is Percent	Needs Less Attn. Percent	Needs Much More Attn. Percent	Needs More Attn. Percent	Okay As Is Percent	Needs Less Attn. Percent
Services to Students								
1. Give effective instruction in language arts skills such as reading, writing, speaking, and English.	23.8	35.6	39.3	1.3	26.7	32.4	40.5	0.4
2. Provide effective instruction in mathematics.	17.8	35.6	46.1	.5	21.8	33.4	44.0	.8
3. Give effective instruction in science.*	14.3	37.1	48.1	.5	19.7	37.0	42.8	.5
4. Provide effective instruction in social studies.	12.2	32.8	52.6	2.4	10.1	31.9	55.9	2.0
5. Offer opportunities in creative subject areas such as art, music, and drama.	14.5	28.4	55.0	2.1	16.8	26.3	54.9	2.0
6. Help students develop physically through activities such as physical education, intramural sports, and competitive teams.	7.9	19.8	67.4	4.9	11.5	20.4	62.1	6.0
7. Prepare students for going to college.	21.1	37.5	38.7	2.7	25.8	33.7	38.5	1.9
8. Prepare students for getting a good job after high school.	29.2	41.4	26.3	3.1	30.4	36.2	30.5	2.9
9. Give each child a good feeling about her or himself as a worthwhile person.	21.0	31.7	45.9	1.4	22.6	32.5	43.1	1.8
10. Provide each child with a feeling that she or he is capable of learning.	23.6	27.6	48.2	.5	21.5	34.2	43.5	.8
11. Give each child a good feeling about her or his own cultural background.*	13.2	24.0	52.6	10.2	18.6	25.5	46.7	9.2
12. Help students respect and understand people of all races and cultures.	15.8	24.6	55.3	4.3	20.1	27.0	47.1	5.9
13. Develop each child's ability to cooperate with other people.	18.7	31.7	48.8	.8	16.5	33.7	48.0	1.7
14. Develop good study skills.	30.0	43.2	26.5	.3	31.1	39.0	29.5	.4
15. Develop each child's desire to continue learning throughout her or his lifetime.	29.1	41.5	28.8	.5	30.1	40.8	28.6	.5
16. Provide each child with a sense of responsibility for her or his own actions.	24.9	34.4	39.3	1.4	25.3	35.8	37.9	1.1
17. Teach students to be concerned about the things that all people in our society need.	19.1	32.4	46.0	2.5	16.5	34.9	45.4	3.3
18. Develop good personal health and hygiene habits.	11.0	26.0	59.2	3.8	15.2	23.8	57.9	3.1
19. Teach children to obey rules and regulations.*	17.8	26.1	47.2	8.9	23.7	24.1	47.0	5.2
20. Support the ideals of a child's home and family.	11.0	20.3	62.5	6.5	10.1	20.3	63.4	6.2
21. Offer a safe, secure school environment.	35.3	33.7	30.2	.8	36.4	35.8	27.4	.4
22. Offer enjoyable experiences while in school.	17.6	29.9	50.4	2.1	17.4	31.0	48.9	2.8
Services to Parents								
1. Give opportunities for parent participation in the classroom.	4.1	22.4	67.5	6.0	6.0	20.4	67.8	5.8
2. Provide useful information about your child's progress.	14.1	33.6	50.7	1.6	16.9	32.6	49.8	.8
3. Involve parents in decisions about selecting school personnel.	15.0	32.4	43.3	9.3	15.7	28.2	47.2	8.9
4. Involve parents in decisions about selecting curriculum and instruction.	15.2	35.7	42.1	6.9	16.4	36.2	40.7	6.7
5. Enable parents to choose their child's teachers.	16.2	38.0	44.8	1.0	16.8	32.0	43.1	8.1
6. Let parents know about opportunities for enrollment in special programs within the school system.	21.8	36.9	39.9	1.3	24.8	35.8	38.1	1.6

* Statistically different expectancies

N ranges from 319 to 375

N ranges from 655 to 771

five services as being satisfactory or needing less attention: 1) give opportunities for parent participation in the classroom (73.5%); 2) help students develop physically (72.3%); 3) support the ideals of a child's home and family (68.8%); 4) develop good personal health and hygiene habits (63.0%); and 5) give each child a good feeling about her or his own cultural background (62.8%).

Non-ESP parents regarded 6 of the services as needing more attention: 1) offer a safe, secure school environment (72.2%); 2) develop each child's desire to continue learning thoughout her or his own lifetime (70.9%); 3) develop good study skills (70.1%); 4) prepare students for getting a good job after high school (66.6%); 5) provide each child with a sense of responsibility for her or his own actions (61.1%); and 6) let parents know about opportunities for enrollment in special programs (60.6%). Non-ESP parents indicated that four services were satisfactory or needed less attention: 1) give opportunities for parent participation in the classroom (73.6%); 2) support the ideals of a child's home and family (69.6%); 3) help students develop physically (68.1%); and 4) develop good personal health and hygiene habits (61.0%).

The frequency and rank order of expectancy responses were analyzed for the ESP and Non-ESP

Parent data. As with data from other categories, a cross-tabulation was performed in terms of race to determine possible differences within categories. It was found that no substantial bias existed within the ESP and Non-ESP parent groups in terms of the race identified for the child of each parent respondent.

Table 14 and Figure 3 present the comparisons among parents of ESP and parents of Non-ESP children. The findings indicate that on most services, ESP and Non-ESP parents share the same perceptions about the need for improvement. Statistically significant differences between the expectancies of ESP and Non-ESP parents occurred on only three items. These differences indicate that Non-ESP parents want more attention given to the instruction of science ($x^2 = 5.48$, $p < .03$), to giving children a good feeling about their own culture ($x^2 = 6.55$, $P < .09$), and to teaching children to obey rules and regulations ($x^2 = 9.71$, $P < .02$).

The differences in parent expectancies for ESP and Non-ESP deserve interpretation based upon their correspondence with the explicit objectives and practices of ESP. Unfortunately, the identification and examination of the objectives and detailed practices of various programs were beyond the scope of the present study. It is

Table 14. Rank Order of Services Perceived As Needing Much More Attention by ESP and NON-ESP Parents

Items	NON-ESP		ESP	
	Rank	NEEDS MUCH MORE ATTENTION Percent	Rank	NEEDS MUCH MORE ATTENTION Percent
Offer a safe, secure school environment.	1	36.4	1	35.3
Develop good study skills	2	31.1	2	30.0
Prepare students for getting a good job after high school.	3	30.4	3	29.2
Develop each child's desire to continue learning throughout her or his lifetime.	4	30.1	4	29.1
Give effective instruction in language arts skills such as reading, writing, speaking and English.	5	26.7	6	23.8
Prepare students for going to college.	6	25.8	9	21.1
Provide each child with a sense of responsibility for her or his own actions.	7	25.3	5	24.9
Let parents know about opportunities for enrollment in special programs within the school system.	8	24.8	8	21.8
Teach children to obey rules and regulations.	9	23.7	13	17.8
Give each child a good feeling about her or himself as a worthwhile person.	10	22.6	10	21.0
Provide effective instruction in mathematics	11	21.8	13	17.8
Provide each child with a feeling that she or he is capable of learning.	12	21.5	7	23.6
Help students respect and understand people of all races and cultures.	13	20.1	17	15.6
Give effective instruction in science.	14	19.7	21	14.3
Give each child a good feeling about her or his own cultural background.	15	18.6	23	13.2
Offer enjoyable experiences while in school.	16	17.4	15	17.6
Provide useful information about your child's progress.	17	16.9	22	14.1
Enable parents to choose their child's teachers.	18	16.8	16	16.2
Offer opportunities in creative subject areas such as art, music, and drama.	18	16.8	20	14.5
Develop each child's ability to cooperate with other people.	20	16.5	12	18.7
Teach students to be concerned about the things that all people in our society need.	20	16.5	11	19.1
Involve parents in decisions about selecting curriculum and instruction.	22	16.4	18	15.2
Involve parents in decisions about selecting school personnel.	23	15.7	19	15.0
Develop good personal health and hygiene habits.	24	15.2	25	11.0
Help students develop physically through activities such as physical education, intramural sports and competitive school teams.	25	11.5	27	7.9
Support the ideals of a child's home and family.	26	10.1	25	11.0
Provide effective instruction in social studies.	26	10.1	24	12.2
Give opportunities for parent participation in the classroom.	28	6.0	28	4.1

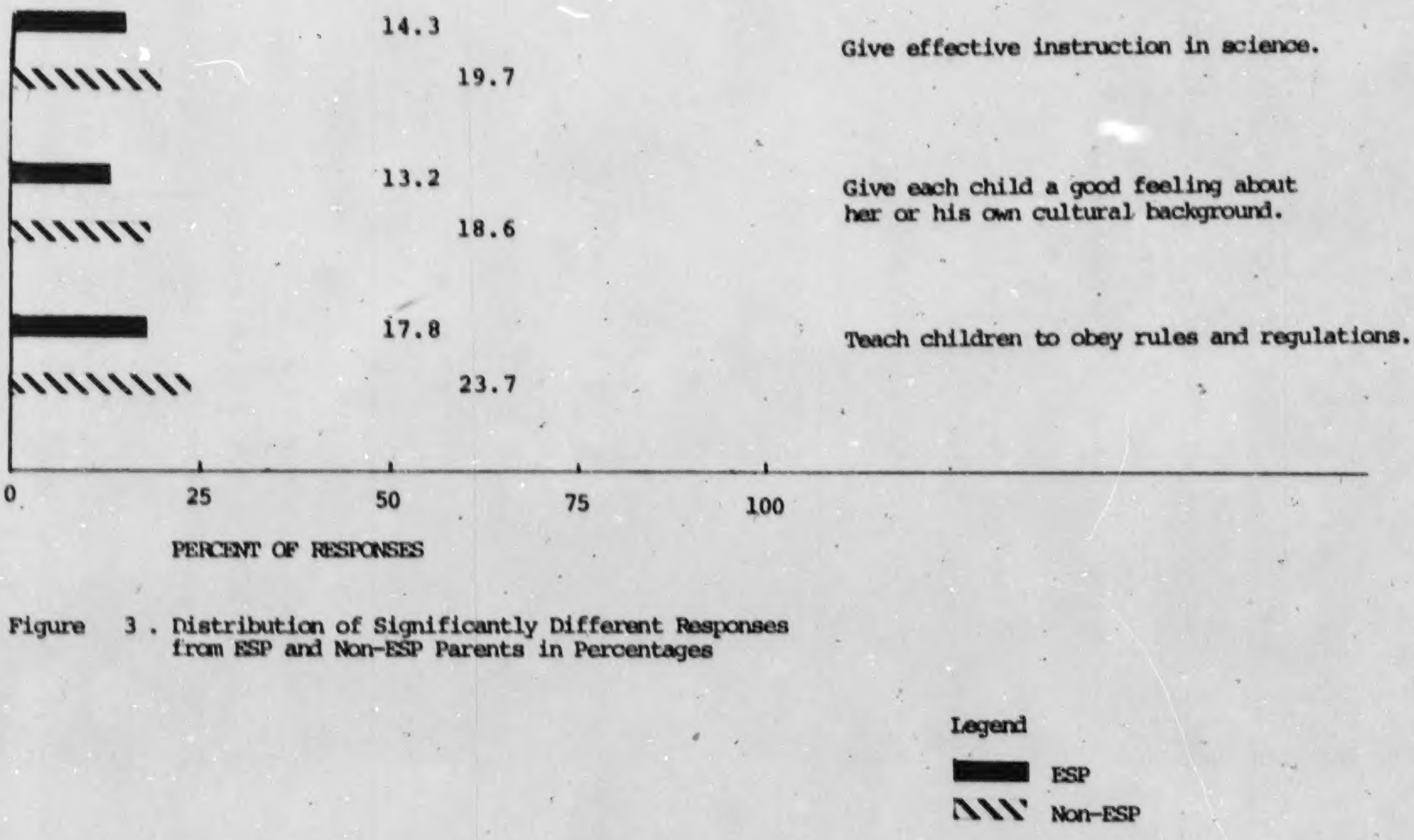


Figure 3 . Distribution of Significantly Different Responses from ESP and Non-ESP Parents in Percentages only possible then to comment that such an interpretation be performed in the future.

Elementary and Secondary Level Parent Groups -- The Distribution of responses for parents with an elementary school child and parents of a secondary school child are displayed in Table 15. Of the elementary level parents, 60% or more indicated that more or much more attention should be given to four of the twenty-eight services: 1) offer a safe, secure school environment (67.3%); 2) prepare students for getting a good job after high school (63.0%); 3) develop good study skills (62.1%); and 4) develop each child's desire to continue learning throughout her or his lifetime (60.8%).

Elementary parents appeared to be satisfied that a sufficient level of effort was being provided for seven of the twenty-eight services. 1) give opportunities for parent participation in the classroom (75.2%); 2) support the ideals of a child's home and family (74.3%); 3) develop good personal health and hygiene habits (63.4%); 4) give each child a good feeling about her or his own cultural background (62.7%); 5) help students develop physically (62.3%); 6) offer enjoyable experiences while in school (61.5%); and 7) teach children to obey rules and regulations (60.0%).

Table 15 Distribution of All Elementary and Secondary Parent Responses in Percentages

Items	Elementary				Secondary			
	Needs Much More Attn. Percent	Needs More Attn. Percent	Okay, As Is Percent	Needs Less Attn. Percent	Needs Much More Attn. Percent	Needs More Attn. Percent	Okay As Is Percent	Needs Less Attn. Percent
Services to Students								
1. Give effective instruction in language arts skills such as reading, writing, speaking, and English.*	13.6	37.8	47.7	.8	33.7	34.1	31.7	.6
2. Provide effective instruction in mathematics.*	16.9	29.7	52.7	.7	24.4	39.0	35.8	.7
3. Give effective instruction in science.	16.4	39.9	43.3	.3	19.6	33.8	45.8	.8
4. Provide effective instruction in social studies.	9.8	33.6	54.9	1.7	12.0	30.7	54.7	2.7
5. Offer opportunities in creative subject areas such as art, music, and drama.*	18.1	32.9	47.8	1.2	13.8	20.4	62.8	3.0
6. Help students develop physically through activities such as physical education, intramural sports, and competitive school teams.*	12.1	25.6	58.2	4.1	8.4	14.3	70.0	7.4
7. Prepare students for going to college.*	20.3	29.4	47.1	3.2	28.0	40.2	30.7	1.1
8. Prepare students for getting a good job after high school.*	25.2	37.8	32.7	4.3	34.4	37.9	25.9	1.8
9. Give each child a good feeling about her or himself as a worthwhile person.*	17.3	27.6	54.0	1.2	27.4	37.3	33.0	2.2
10. Provide each child with a feeling that she or he is capable of learning.*	17.8	27.1	54.8	.3	27.1	37.6	34.2	1.1
11. Give each child a good feeling about her or his own cultural background.*	14.5	22.8	55.0	7.7	19.4	27.4	41.5	11.7
12. Help students respect and understand people of all races and cultures.*	14.9	25.8	54.0	5.4	22.8	26.7	45.1	5.4
13. Develop each child's ability to cooperate with other people.*	23.7	20.6	55.0	.8	21.2	36.9	39.9	2.0
14. Develop good study skills.*	23.3	38.8	37.6	.3	38.8	42.1	18.7	.4
15. Develop each child's desire to continue learning throughout her or his lifetime.*	21.9	38.9	38.7	.5	38.2	43.3	18.0	.6
16. Provide each child with a sense of responsibility for her or his own actions.*	19.8	34.1	45.0	1.2	31.1	36.7	31.1	1.1
17. Teach students to be concerned about the things that all people in our society need.*	15.6	28.8	53.0	2.6	19.2	39.8	37.5	3.4
18. Develop good personal health and hygiene habits.*	12.0	24.5	61.2	2.2	15.8	24.6	55.0	4.6
19. Teach children to obey rules and regulations.*	16.9	23.1	54.1	5.9	27.2	26.6	39.2	7.0
20. Support the ideals of a child's home and family.*	8.4	17.4	68.2	6.1	12.6	23.5	57.4	6.5
21. Offer a safe, secure school environment.*	31.5	35.8	32.5	.3	41.2	34.4	23.7	.7
22. Offer enjoyable experiences while in school.*	10.8	27.7	59.5	2.0	25.0	33.8	38.0	3.2
Services to Parents								
1. Give opportunities for parent participation in the classroom.	4.7	20.1	70.4	4.8	6.3	22.1	64.6	7.0
2. Provide useful information about your child's progress.*	12.2	28.4	58.6	.8	20.2	38.0	40.0	1.3
3. Involve parents in decisions about selecting school personnel.	15.5	30.2	45.7	8.6	15.4	28.9	46.2	9.4
4. Involve parents in decisions about selecting curriculum and instruction.	16.2	37.7	39.7	6.4	15.0	34.3	42.7	7.2
5. Enable parents to choose their child's teachers.*	18.5	31.9	43.5	6.1	14.4	29.4	43.8	12.5
6. Let parents know about opportunities for enrollment in special programs within the school system.	23.4	36.0	39.2	1.3	24.3	36.3	38.1	1.3

* Statistically different expectancies — N ranges from 498 to 606 — N ranges from 506 to 541

Thus parents of elementary students find a handful of services in need of improvement and another group of services which they perceive to be satisfactory. They are divided in their expectancies for the remaining services.

For parents of secondary students, eleven of the 28 services were indicated as needing more or much more attention. Interestingly, several of these services received this rating by over 75% of the secondary parents: 1) develop each child's desire to continue learning throughout her or his lifetime (81.5%); 2) develop good study skills (80.9%); and 3) offer a safe, secure school environment (75.6%). Services cited as needing attention by 60 to 74% of secondary parents included, in order: 1) prepare students for getting good jobs after high school; 2) prepare students to go to college; 3) give effective instruction in language arts; 4) provide each child with a sense of responsibility for her or his own actions; 5) give each child a good feeling about her or himself as a worthwhile person; 6) provide each child with a feeling that he or she is capable of learning; 7) provide effective instruction in mathematics; or 8) let parents know about opportunities for enrollment in special programs. Only three services were rated by 60% or more of the secondary parents as being *okay* or needing less attention: 1) give opportunities for parent participation in the classroom (71.6%); 2) offer opportunities in creative subject areas such as art, music, and drama (70.8%); and 3) support the ideals of a child's home and family (63.9%). Thus parents of secondary students appear to be substantially more dissatisfied than they are satisfied with the current status of B.U.S.D. services.

Comparisons of responses for parents of elementary and secondary students showed statistically significant differences for eighteen of the twenty-eight services (Figure 4). For each of these statistically significant differences, a higher percentage of secondary parents indicated that greater attention is needed. Thus, parents of elementary children appeared to be more satisfied with the current B.U.S.D. services than did parents of secondary children.

In terms of priorities for improvement, Table 16 presents the rank order of expectancies for these two groups. The results suggest that in most service areas, elementary and secondary parents share similar expectancies. Interesting differences exist with the following services*: Elementary

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*Tests of significance between ranks were not performed.

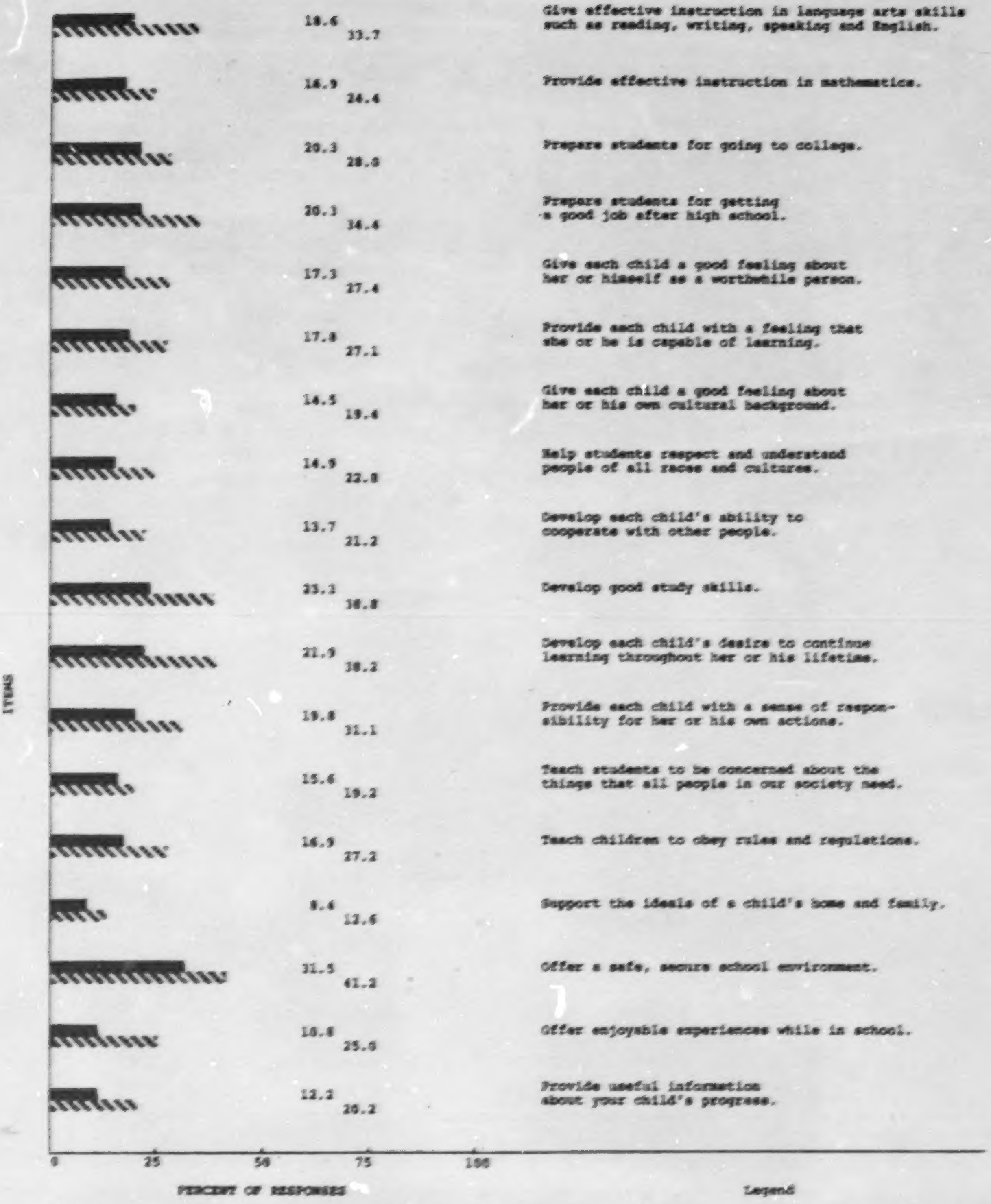

Figure 6- Distribution of Significantly Different Responses from Elementary and Secondary Parents in Percentages

Table 16. Rank Order of Services Perceived as Needing Much More Attention by Elementary and Secondary Parents

Items	Elementary		Secondary	
	Rank	NEEDS MUCH MORE ATTENTION Percent	Rank	NEEDS MUCH MORE ATTENTION Percent
Offer a safe, secure school environment.	1	31.5	1	41.2
Prepare students for getting a good job after high school.	2	25.2	4	34.4
Let parents know about opportunities for enrollment in special programs within the school system.	3	23.4	13	24.3
Develop good study skills.	4	23.1	2	38.8
Develop each child's desire to continue learning throughout her or his lifetime.	5	21.9	3	38.2
Prepare students for going to college.	6	20.3	7	28.0
Provide each child with a sense of responsibility for her or his own actions.	7	19.8	6	31.1
Give effective instruction in language arts skills such as reading, writing, speaking, and English.	8	18.6	5	33.7
Enable parents to choose their child's teachers.	9	18.5	23	14.4
Offer opportunities in creative subject areas such as art, music, and drama.	10	18.1	24	13.8
Provide each child with a feeling that she or he is capable of learning.	11	17.8	10	27.1
Give each child a good feeling about her or himself as a worthwhile person.	12	17.3	8	27.4
Provide effective instruction in mathematics.	13	16.9	12	24.4
Teach children to obey rules and regulations.	14	16.9	9	27.3
Give effective instruction in science.	15	16.4	17	19.6
Involve parents in decisions about selecting curriculum and instruction.	16	16.2	20	15.8
Teach students to be concerned about the things that all people in our society need.	17	15.6	19	19.2
Involve parents in decisions about selecting school personnel.	18	15.5	22	15.4
Help students respect and understand people of all races and cultures.	19	14.9	14	22.8
Give each child a good feeling about her or his own cultural background.	20	14.5	18	19.4
Develop each child's ability to cooperate with other people.	21	13.7	15	21.2
Provide useful information about your child's progress.	22	13.2	16	20.2
Help students develop physically through such activities as physical education, intramural sports and competitive school teams.	23	13.1	27	8.4
Develop good personal health and hygiene habits.	24	12.0	20	15.8
Offer enjoyable experiences while in school.	25	10.8	11	25.6
Provide effective instruction in social studies.	26	9.8	26	12.0
Support the ideals of a child's home and family.	27	8.4	25	12.6
Give opportunities for parent participation in the classroom.	28	4.7	28	6.3

parents placed a higher priority on services which 1) inform them about special programs; 2) enable them to choose their child's teachers; and 3) offer their children instructional opportunities in creative arts. Secondary parents placed a higher priority than elementary parents on one service; i.e., on providing enjoyable school experiences.

Cross tabulations on the data from the parents of Elementary and Secondary students did not reveal substantial between-groups bias on the basis of race.

• • Parents of Racially Different Students -- The distribution of responses for the parents of Black and White students is presented in Table 17. These two groups comprised over 85% if all parent respondents. Because dividing the remaining number of respondents over four categories created very small comparative units for analysis, most analyses were performed only on the data from the parents of Black and White students. Table 18, however, presents the distribution of parent expectancy responses for the other four racial and ethnic categories.

An examination of the responses given by parents of Black students reveals that over 60% of these parents designated sixteen of the twenty-eight services as needing more attention. Four services were so

Table 17 · Distribution of All Responses from Parents of Black and White Students in Percentages

Items	Black Needs Much More Attn. Percent	Needs More Attn. Percent	Okay As Is Percent	Needs Less Attn. Percent	White Needs Much More Attn. Percent	Needs More Attn. Percent	Okay As Is Percent	Needs Less Attn. Percent
Services to Students								
1. Give effective instruction in language arts skills such as reading, writing, speaking, and English.*	32.4	35.4	31.6	.6	24.4	33.3	41.3	.9
2. Provide effective instruction in mathematics.*	28.6	39.3	31.1	.9	18.8	32.1	48.3	.8
3. Give effective instruction in science.	15.5	35.9	47.4	1.2	20.5	39.2	40.0	.3
4. Provide effective instruction in social studies.	10.3	38.3	50.2	1.2	12.3	29.8	54.9	2.9
5. Offer opportunities in creative subject areas such as art, music, and drama.	14.8	25.2	57.6	2.4	17.9	28.7	51.5	1.9
6. Help students develop physically through activities such as physical education, intramural sports, and competitive teams.	10.5	20.7	65.0	3.9	10.4	20.4	62.2	7.0
7. Prepare students for going to college.*	41.2	37.1	20.1	1.6	14.0	35.9	47.4	2.7
8. Prepare students for getting a good job after high school.*	45.1	39.1	12.9	2.5	22.8	37.4	35.8	3.9
9. Give each child a good feeling about her or himself as a worthwhile person.*	32.7	36.6	29.8	.9	17.3	30.8	49.4	2.6
10. Provide each child with a feeling that she or he is capable of learning.*	36.5	33.2	29.1	1.2	16.3	32.2	51.0	.6
11. Give each child a good feeling about her or his own cultural background.*	32.1	30.9	35.9	1.2	9.9	19.1	55.9	15.1
12. Help students respect and understand people of all races and cultures.*	35.7	30.7	31.6	2.0	10.8	21.4	60.2	7.6
13. Develop each child's ability to cooperate with other people.*	24.0	39.2	35.0	1.8	15.2	29.8	53.7	1.3
14. Develop good study skills.*	33.9	38.6	27.4	.0	29.6	41.9	28.0	.6
15. Develop each child's desire to continue learning throughout her or his lifetime.*	37.7	42.2	19.8	.3	28.0	41.4	29.9	.7
16. Provide each child with a sense of responsibility for her or his own actions.*	32.1	38.4	28.0	1.5	24.0	34.7	40.0	1.3
17. Teach students to be concerned about the things that all people in our society need.*	23.5	44.3	29.8	2.4	15.6	26.6	52.3	5.5
18. Develop good personal health and hygiene habits.*	22.8	30.3	44.5	2.4	8.9	21.6	65.2	4.3
19. Teach children to obey rules and regulations.*	30.9	27.4	37.9	3.8	18.1	23.0	50.0	8.9
20. Support the ideals of a child's home and family.*	16.3	29.6	49.2	4.8	8.3	14.2	69.4	8.0
21. Offer a safe, secure school environment.*	39.2	35.7	23.6	1.5	41.4	35.5	23.0	.2
22. Offer enjoyable experiences while in school.*	21.0	33.1	43.8	2.1	15.8	30.6	50.2	3.3
Services to Parents								
1. Give opportunities for parent participation in the classroom.*	18.2	22.8	53.6	4.4	3.4	15.0	75.2	6.4
2. Provide useful information about your child's progress.*	25.2	34.8	39.4	.6	12.1	31.5	55.0	1.4
3. Involve parents in decisions about selecting school personnel.*	21.1	32.2	42.3	4.4	14.6	29.4	43.5	12.5
4. Involve parents in decisions about selecting curriculum and instruction.*	21.6	39.0	36.6	2.7	15.1	35.3	40.2	9.3
5. Enable parents to choose their child's teachers.*	17.5	28.9	45.8	7.8	17.9	33.1	40.2	8.9
6. Let parents know about opportunities for enrollment in special programs within the school system.*	35.1	33.6	29.8	1.5	20.6	36.9	41.1	1.4

* Statistically different expectancies N ranges from 317 to 345 N ranges from 598 to 640

Table 18 : Distribution of All Responses from Parents of American Indian, Asian, Chicano, & Other Students in Percentages

Items	American Indian				Asian				Chicano				Other			
	Needs Much More Attn.	Needs More Attn.	Okay As Is	Needs Less Attn.	Needs Much More Attn.	Needs More Attn.	Okay As Is	Needs Less Attn.	Needs Much More Attn.	Needs More Attn.	Okay As Is	Needs Less Attn.	Needs Much More Attn.	Needs More Attn.	Okay As Is	Needs Less Attn.
	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent
Services to Students																
1. Give effective instruction in language arts skills such a reading, writing, speaking, and English.	—	50.0	50.0	—	16.5	27.8	55.7	0.0	22.2	37.0	40.7	0.0	15.0	30.0	55.0	0.0
2. Provide effective instruction in mathematics.	50.0	—	100.0	—	8.8	32.3	58.8	0.0	21.4	32.1	46.4	0.0	5.0	25.0	70.0	0.0
3. Give effective instruction in science.	50.0	—	50.0	—	13.2	31.6	55.3	0.0	14.8	37.0	48.1	0.0	5.0	25.0	70.0	0.0
4. Provide effective instruction in social studies.	—	—	50.0	50.0	5.4	28.5	64.3	0.9	10.7	39.3	50.0	0.0	5.0	15.0	80.0	0.0
5. Offer opportunities in creative subject areas such as art, music, and drama.	—	—	100.0	—	13.0	21.7	62.6	2.6	14.3	38.6	47.1	0.0	0.0	35.0	65.0	0.0
6. Help students develop physically through activities such as physical education, intramural sports, and competitive school teams.	—	50.0	50.0	—	9.6	18.4	68.4	3.5	19.2	15.4	65.4	0.0	0.0	21.1	68.4	10.5
7. Prepare students for going to college.	—	50.0	50.0	—	23.0	26.9	48.3	1.8	36.0	32.0	32.0	0.0	23.5	17.6	58.8	0.0
8. Prepare students for getting a good job after high school.	—	—	100.0	—	20.0	40.0	39.0	1.0	32.0	36.0	3.2	0.0	23.5	17.6	58.8	0.0
9. Give each child a good feeling about her or himself as a worthwhile person.	—	50.0	50.0	—	18.5	26.5	54.0	0.0	25.9	25.9	48.1	0.0	5.0	40.0	55.0	0.0
10. Provide each child with a feeling that she or he is capable of learning.	50.0	—	50.0	—	14.2	27.4	58.4	0.0	25.9	37.0	37.0	0.0	5.0	30.0	65.0	0.0
11. Give each child a good feeling about her or his own cultural background.	—	—	100.0	—	11.4	37.7	43.9	7.0	18.5	29.6	48.1	3.7	0.0	31.6	63.2	5.3
12. Help students respect and understand people of all races and cultures.	—	—	100.0	—	12.3	39.5	44.7	3.5	21.4	32.1	42.9	3.6	10.0	20.0	65.0	5.0
13. Develop each child's ability to cooperate with other people.	—	—	100.0	—	11.4	33.3	53.5	1.8	14.3	28.6	57.1	0.0	5.3	42.1	52.6	0.0
14. Develop good study skills.	—	50.0	50.0	—	10.5	40.3	48.2	0.9	25.0	39.3	35.7	0.0	5.0	40.0	55.0	0.0
15. Develop each child's desire to continue learning throughout her or his lifetime.	—	50.0	50.0	—	21.9	36.0	41.2	0.9	18.5	37.0	44.4	0.0	15.0	40.0	45.0	0.0
16. Provide each child with a sense of responsibility for her or his own actions.	—	—	100.0	—	16.7	30.7	52.6	0.0	18.5	37.0	44.4	0.0	5.0	30.0	65.0	0.0
17. Teach students to be concerned about the things that all people in our society need.	—	—	100.00	—	13.9	33.9	49.6	2.6	7.1	39.3	50.0	3.6	5.0	35.0	60.0	0.0
18. Develop good personal health and hygiene habits.	—	—	100.00	—	15.7	25.2	56.5	2.6	14.8	18.5	66.7	0.0	0.0	25.0	75.0	0.0
19. Teach children to obey rules and regulations.	—	50.0	50.0	—	15.7	27.8	53.0	3.5	25.0	10.7	64.3	0.0	10.5	36.8	52.6	0.0
20. Support the ideals of a child's home and family.	—	—	100.00	—	9.4	21.0	65.2	4.5	7.7	26.9	65.4	0.0	5.3	5.3	89.5	0.0
21. Offer a safe, secure school environment.	50.0	—	50.0	—	24.6	36.0	39.5	0.0	42.9	28.6	28.6	0.0	36.8	21.1	42.1	0.0
22. Offer enjoyable experiences while in school.	—	50.0	50.0	—	16.0	26.1	57.0	.9	28.6	17.9	53.6	0.0	5.3	26.3	68.4	0.0
Services to Parents																
1. Give opportunities for parent participation in the classroom.	—	50.0	50.0	—	4.3	19.1	67.0	9.6	3.8	34.6	61.5	0.0	0.0	15.0	85.0	0.0
2. Provide useful information about your child's progress.	—	50.0	50.0	—	11.4	35.1	52.6	.9	18.5	33.3	48.1	0.0	5.0	30.0	65.0	0.0
3. Involve parents in decisions about selecting school personnel.	—	—	100.0	—	5.4	21.6	65.8	7.2	10.7	39.3	50.0	0.0	10.0	25.0	60.0	5.0
4. Involve parents in decisions about selecting curriculum and instruction.	50.0	—	50.0	—	4.5	36.2	55.0	4.3	14.8	37.0	44.4	3.7	10.5	21.1	63.2	5.3
5. Enable parents to choose their child's teachers.	—	50.0	50.0	—	6.2	24.8	55.8	13.3	25.9	22.2	44.4	7.4	10.0	30.0	45.0	15.0
6. Let parents know about opportunities for enrollment in special programs within the school system.	—	50.0	50.0	—	8.8	43.9	46.5	.9	25.9	29.6	44.4	0.0	20.0	20.0	60.0	0.0
	N = 2				N ranges from 105 to 115				N ranges from 25 to 28				N ranges from 17 to 20			

cited by over 75% of the parents of Black children: 1) prepare students for getting good jobs after high school (84.5%); 2) develop each child's desire to continue learning throughout her or his lifetime (79.9%); prepare students for going to college (78.3%); and 4) develop good study skills (77.5%). Each of these services has a future-oriented purpose. Between 60 and 74% of the parents of Black students indicated that they perceived twelve other services to be in need of attention: 1) provide each child with a sense of responsibility for her or his own actions (70.5%); 2) provide each child with a feeling that she or he is capable of learning (69.7%); 3) give each child a good feeling about her or himself as a worthwhile person (69.3%); 4) let parents know about opportunities for enrollment in special programs (68.7%); 5) give effective instruction in mathematics (67.9%); 6) give effective instruction in language arts (67.8%); 7) teach students to be concerned about the things all people need (67.8%); 8) help students respect and understand people of all other races and cultures (66.4%); 9) offer a safe, secure school environment (64.9%); 10) develop each child's ability to cooperate with other people (63.2%); 11) give each child a good feeling about her or his own cultural background

(63.0%); and 12) involve parents in decisions about selecting curriculum and instruction (60.6%). There were three services which the parents of Black students felt were satisfactory or needed less attention: 1) teach children to obey rules and regulations (71.7%); 2) help students develop physically (68.9%); and 3) offer opportunities in creative subject areas (60.0%).

The parents of White children cited many fewer services as being in need of greater emphasis or improvement. Only four of the twenty-eight services were singled out in this way: 1) offer a safe, secure school environment (76.9%); 2) develop good study skills (71.5%); 3) develop each child's desire to continue learning throughout her or his lifetime (69.4%); and 4) prepare students for getting a good job after high school (60.2%). They indicated satisfaction with 7 services: 1) give opportunity for parent participation in the classroom (81.6%); 2) support the ideals of a child's home and family (77.4%); 3) give each child a good feeling about her or his own cultural background (71.0%); 4) prepare students for going to college (70.1%); 5) develop good personal health and hygiene habits (69.5%); 6) help students respect and understand people of all races and cultures (67.8%); and 7) help students develop physically (67.2%).

The frequency distribution of expectancies for parents of students identified as American Indians, Asians, Chicanos, and Other (Table 18) shows a pattern of response that is also in contrast to that of the parents of Black children. That is, in contrast to the sixteen services cited by parents of Black students, these parents indicated only zero to three services which they felt needed attention. Parents of American Indians and the nonspecific *other* category of students did not single out any services for increased attention. Over 60% of the parents of Asian students expressed that more attention should be given to two services: 1) prepare students to get good jobs after high school (60.0%); and 2) offer a safe, secure school environment (60.6%). Over 60% of the parents of Chicano students who responded indicated that more attention was needed by three services: 1) provide each child with a feeling that he or she is capable of learning (88.8%); 2) offer a safe, secure school environment (71.5%); and 3) develop good study skills (64.3%). The two parents of American Indian students expressed satisfaction for twelve of the twenty-eight B.U.S.D. services. Parents of Asian students were satisfied with eight of the services: 1) give opportunities for parent participation in the classroom (76.6%); 2) involve parents in decisions about selecting school personnel (77.0%); 3) help students develop physically (71.9%); 4) support the ideals of a child's home and family (69.7%); 5) enable parents to choose their child's teachers (60.1%); 6) provide effective instruction in social studies (65.2%); 7) offer opportunities in creative subject areas (65.2%); and 8) involve parents in decisions about selecting curriculum and instruction (61.3%). Parents of Chicano children were satisfied with the level of effort provided for five services: 1) develop good personal health and hygiene habits (66.7%); 2) help students develop physically (65.4%); 3) support the ideals of a child's home and family (65.4%); 4) teach children to obey rules and regulations (64.3%); and 5) give opportunities for parent participation in the classroom (61.5%).

Figure 5 presents comparisons of responses given by the parents of children in various racial groups. As displayed, significant differences were found between the racial groups of parents on twenty-three of the twenty-eight items. Parents of Black students tended to be more concerned than the other racial groups about the need for improvement in almost all service areas. Thus, in general, B.U.S.D. services are more incompatible with the expectations of Black parents than they are for any other racial

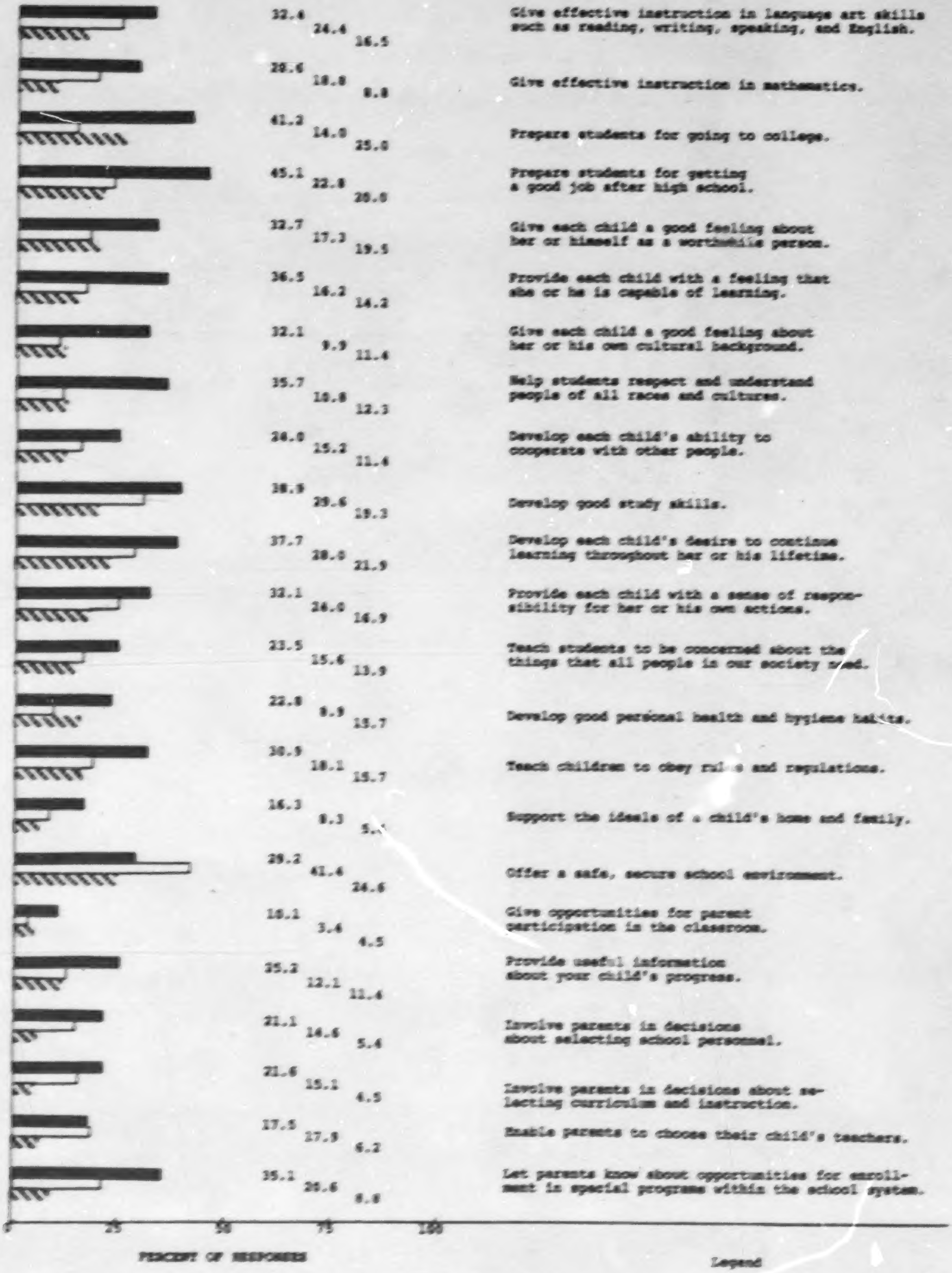

Figure 5· Distribution of Significantly Different Responses from Parents of Racially Different Students in Percentages

Legend

▇ Black

▭ White

▨ Asian

group. For several items, the heightened concern of Black parents was substantial. Table 19 shows that while Black parents included future- and academically-oriented services within the first five ranks (prepare students for a good job after high school, prepare students for college, develop good study skills, develop desire for lifelong learning), White parents emphasized security, academics, and responsibility (offer safe school environment, develop good study skills, develop desire for lifelong learning, develop responsibility for her or his own actions).

- Educationally Different Parent Groups -- The distribution of expectancies for parents with different educational backgrounds is shown in Table 20. When the services are identified for which 60% or more of these educationally different parents responded that more attention is needed, it is clear that the degree of expectancy fulfillment increases with an increasing measure of parent education. Over 60% of the services needed more attention, with 6% of these being designated by 75% or more of this parent group. Over 60% of high school graduates recommended more attention to 9 services, and college graduates indicated four services needed more attention. Conversely, over 60% of parents with less than high school graduation were

Table 19. Rank Order of Services Perceived as Needing Much More Attention by Parents of Black and White Students

Items	Black		White	
	Rank	*NEEDS MUCH MORE ATTENTION* Percent	Rank	*NEEDS MUCH MORE ATTENTION* Percent
Prepare students for getting a good job after high school.	1	45.1	6	22.8
Prepare students for going to college.	2	41.2	20	14.0
Develop good study skills.	3	38.9	2	29.6
Develop each child's desire to continue learning throughout her or his lifetime.	4	37.7	3	28.0
Provide each child with a feeling that he or she is capable of learning.	5	36.5	14	16.2
Help students respect and understand people of all races and cultures.	6	35.7	23	10.8
Let parents know about opportunities for enrollment in special programs within the school system.	7	35.1	7	20.6
Give each child a good feeling about her or himself as a worthwhile person.	8	32.7	13	17.3
Give effective instruction in language arts skills such as reading, writing, speaking and English.	9	32.4	4	24.4
Give each child a good feeling about her or his own culture background.	10	32.1	25	9.9
Provide each child with a sense of responsibility for her or his own actions.	10	[illegible]	5	24.0
Teach children to obey rules and regulations.	12	30.9	10	18.1
Offer a safe, secure school environment.	13	29.2	1	41.4
Provide effective instruction in math.	14	28.6	9	18.8
Provide useful information about your child's progress.	15	25.2	22	12.1
Develop each child's ability to cooperate with other people.	16	24.0	17	15.2
Teach students to be concerned about the things that all people in our society need.	17	23.5	16	15.6
Develop good personal health and hygiene habits.	18	22.8	26	8.9
Involve parents in decisions about selecting curriculum and instruction.	19	21.6	18	15.1
Involve parents in decisions about selecting school personnel.	20	21.1	19	14.6
Offer enjoyable experiences while in school.	21	21.0	15	15.8
Enable parents to choose their child's teachers.	22	17.5	11	17.9
Support the ideals of a child's home and family.	23	16.3	27	8.3
Give effective instruction in science.	24	15.5	8	20.5
Offer opportunities in creative subject areas such as art, music and drama.	25	14.8	24	10.4
Help students develop physically through such activities as physical education, intramural sports, and competitive school teams.	26	10.5	11	17.9
Provide effective instruction in social studies.	27	10.3	21	12.3
Give opportunities for parent participation in the classroom.	28	10.1	28	3.2

Table 20 . Distribution of Responses from Educationally Different Parents in Percentages

Items	Less Than High School Graduation				High School Graduation				College Graduation			
	Needs Much More Attn. Percent	Needs More Attn. Percent	Okay As Is Percent	Needs Less Attn. Percent	Needs Much More Attn. Percent	Needs More Attn. Percent	Okay As Is Percent	Needs Less Attn. Percent	Needs Much More Attn. Percent	Needs More Attn. Percent	Okay As Is Percent	Needs Less Attn. Percent
Services to Students												
1. Give effective instruction in language arts skills such as reading, writing, speaking, and English.	36.6	24.4	39.0	0.0	26.9	31.8	40.6	.7	24.3	34.5	40.2	.7
2. Provide effective instruction in mathematics.*	32.5	47.5	20.0	0.0	27.3	30.2	41.7	.7	17.3	34.8	47.1	.7
3. Give effective instruction in science.*	17.9	41.0	41.0	0.0	13.3	32.1	53.5	1.1	19.4	38.7	41.5	.4
4. Provide effective instruction in social studies.	19.4	33.3	47.2	0.0	9.2	31.7	57.6	1.5	10.9	32.1	54.5	2.5
5. Offer opportunities in creative subject areas such as art, music and drama.	17.5	27.5	52.5	2.5	16.0	24.9	55.5	3.6	16.1	27.9	54.6	1.4
6. Help students develop physically through activities such as physical education, intramural sports, and competitive school teams.	15.8	21.1	60.5	2.6	10.1	18.3	67.6	4.0	10.3	20.9	62.5	6.3
7. Prepare students for going to college.*	39.5	44.7	13.2	2.6	34.1	33.0	29.5	3.4	19.6	35.5	43.2	1.7
8. Prepare students for getting a good job after high school.*	42.1	47.4	5.3	5.3	39.4	38.6	19.3	2.7	25.3	37.4	34.3	3.0
9. Give each child a good feeling about her or himself as a worthwhile person.*	35.0	40.0	25.0	0.0	26.6	38.3	35.1	.0	19.6	28.6	48.4	3.4
10. Provide each child with a feeling that she or he is capable of learning.*	50.0	22.5	27.5	0.0	31.1	35.0	33.6	.4	17.4	31.4	50.3	.9
11. Give each child a good feeling about her or his own cultural background.*	35.0	25.0	40.0	0.0	25.3	31.0	40.6	3.2	12.6	23.0	52.0	12.4
12. Help students respect and understand people of all races and cultures.*	37.5	35.0	25.0	2.5	26.5	30.8	39.1	3.6	13.9	26.7	53.2	6.2
13. Develop each child's ability to cooperate with other people.*	20.0	47.5	27.5	5.0	18.4	35.8	43.6	1.6	18.1	31.2	50.3	1.4
14. Develop good study skills.	47.5	27.5	22.5	2.5	30.3	41.1	28.0	.4	29.7	40.8	29.1	.3
15. Develop each child's desire to continue learning throughout her or his lifetime.	35.9	43.6	20.5	0.0	31.4	41.9	25.6	1.1	28.4	41.1	30.2	.4
16. Provide each child with a sense of responsibility for her or his own actions.	35.0	35.0	27.5	2.5	26.3	34.5	38.5	.7	24.0	35.7	39.1	1.3
17. Teach students to be concerned about the things that all people in our society need.*	30.8	35.9	28.2	5.1	18.8	39.9	39.1	2.2	16.0	31.8	49.0	3.2
18. Develop good personal health and hygiene habits.*	25.6	28.2	43.6	2.6	20.7	25.4	51.6	2.3	10.5	24.3	61.6	3.7
19. Teach children to obey rules and regulations.*	32.5	37.5	30.0	0.0	27.8	23.1	44.5	4.6	18.6	24.9	48.9	7.6
20. Support the ideals of a child's home and family.*	20.5	35.9	38.5	5.1	13.2	26.1	55.1	5.5	8.6	17.0	67.7	6.7
21. Offer a safe, secure school environment.	30.0	27.5	42.5	0.0	31.6	34.7	32.6	1.1	37.9	35.8	25.9	.4
22. Offer enjoyable experiences while in school.	36.8	26.3	34.2	2.6	16.9	30.6	50.4	2.1	18.6	30.8	48.9	2.7
Services to Parents												
1. Give opportunities for parent participation in the classroom.*	22.5	25.0	47.5	5.0	5.3	29.1	59.9	5.7	6.5	17.9	71.8	3.8
2. Provide useful information about your child's progress.	17.5	40.0	42.5	0.0	20.1	32.5	45.9	1.4	14.2	32.6	52.2	1.0
3. Involve parents in decisions about selecting school personnel.*	22.0	34.1	41.5	2.4	17.5	26.1	53.2	3.2	14.3	30.7	43.7	11.3
4. Involve parents in decisions about selecting curriculum and instruction.*	17.9	33.3	46.2	2.6	16.2	36.9	44.4	2.5	15.7	36.2	39.5	8.6
5. Enable parents to choose their child's teachers.*	13.2	31.6	34.2	21.1	15.0	24.9	52.0	8.1	17.2	32.7	41.3	8.8
6. Let parents know about opportunities for enrollment in special programs within the school system.*	41.0	25.6	28.2	5.1	27.6	36.7	34.3	1.4	21.7	36.4	40.8	1.1
* Statistically different expectancies	N ranges from 36 to 41				N ranges from 261 to 286				N ranges from 688 to 812			

satisfied with only one service (help students develop physically (63.1%), while high school and college graduates were satisfied with four and six services, respectively. Specifically, expectancies of high school graduates were unfulfilled on the following services: 1) prepare students for getting a good job after high school (78.0%); 2) develop each child's desire to continue learning throughout her or his lifetime (73.3%); 3) develop good study skills (71.6%); 4) prepare students for going to college (67.1%); 5) offer a safe, secure school environment (66.3%); 6) provide each child with a feeling that she or he is capable of learning (66.1%); 7) give each child a good feeling about being a worthwhile person (64.9%); 8) let parents know about opportunities for special programs (64.3%); 9) provide each child with a sense of responsibility for her or his own actions (60.8%). High school graduates were satisfied with the attention given to 1) helping students develop physically (71.6%); 2) the opportunities for participation given to parents in the classroom (65.6%); 3) supporting the ideals of home and family (60.6%); 4) enabling parent to choose their child's teachers (60.1%).

Parents with a college graduation and post-graduate work identified: 1) offer a safe, secure school environment (73.7%); 2) develop good study skills (70.6%); 3) develop each child's desire to continue throughout her or his lifetime (69.5%); and 4) preparing students for getting a good job after high school (62.7%) as services which need attention. They were satisfied with: 1) opportunities for parent participation in the classroom (77.6%); 2) support for ideals of home and family (74.4%); 3) help students develop physically (65.5%); 4) develop good personal health and hygiene habits (65.3%); 5) give each child a good feeling about her or his own cultural background (64.4%); and 6) help students respect and understand people of all races and cultures.

The distribution of responses by the various educational levels was statistically significant for fifteen items (Figure 6). However, because 75% of the parents with the least amount of education (less than high school) are Black, it is not possible to draw a clear distinction between the effects that race and education have upon the responses to survey questions. Keeping this precaution in mind, an examination of Figure 6 indicates that parents with less education are more inclined to advocate improvement in all service areas.

Priorities for increased attention to services also differed as a function of parent education level (Table 21). The first five ranks for parents with less than high school graduation all related

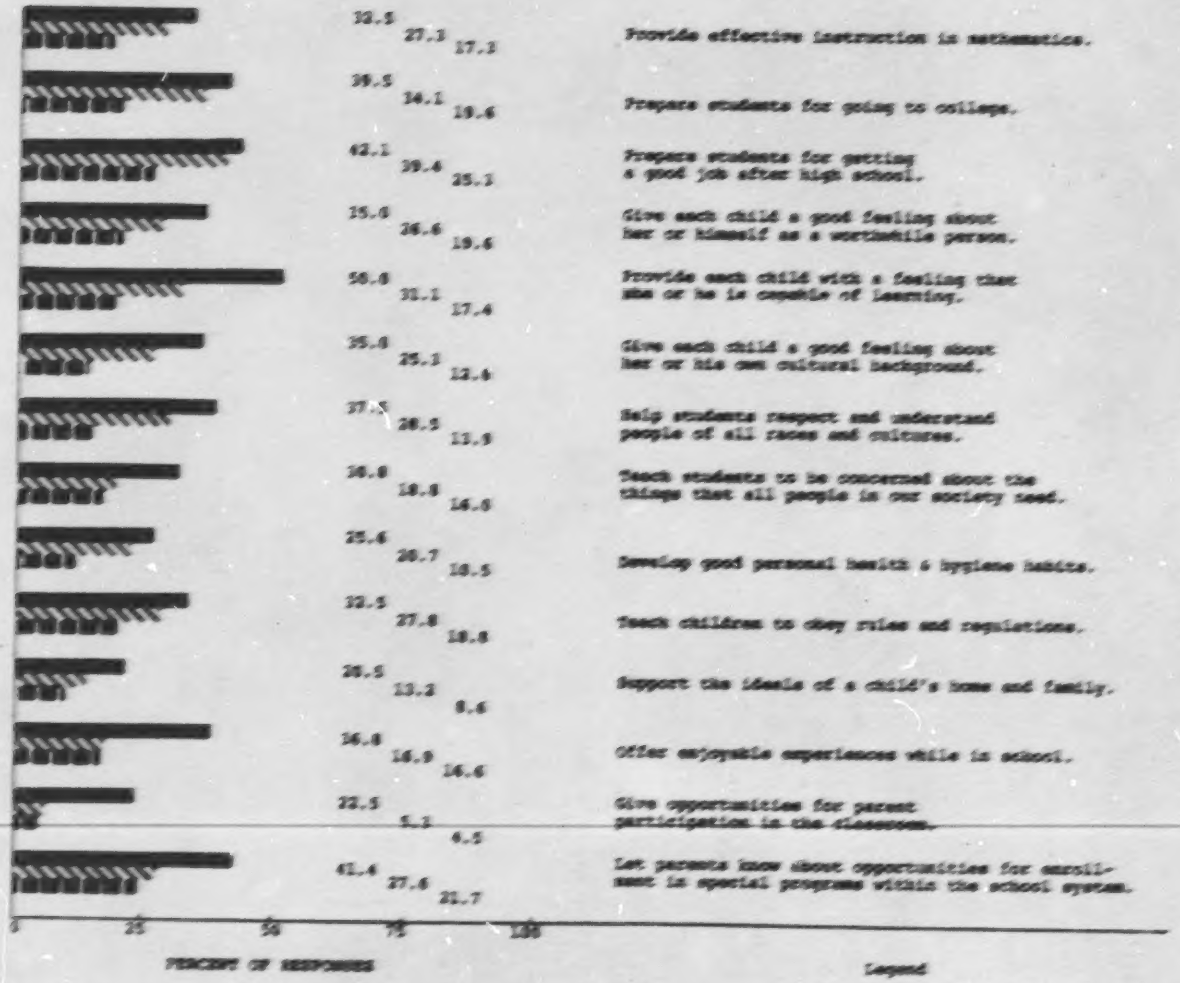

Figure 6 - Distribution of Significantly Different Responses from Educationally Different Parents in Percentages

Legend

■ <High School Graduates

▨ High School Graduates

▪ College Graduates

Table 21. Rank Order of Services Perceived as Needing Much More Attention by Educationally Different Parents

Items	Less Than High School Graduation		High School Graduation		College Graduation	
	Rank	NEEDS MUCH MORE ATTENTION Percent	Rank	NEEDS MUCH MORE ATTENTION Percent	Rank	NEEDS MUCH MORE ATTENTION Percent
Provide each child with a feeling that he or she is capable of learning.	1	50.0	5	31.1	12	17.4
Develop good study skills.	2	41.5	6	30.5	2	28.7
Prepare students for getting a good job after high school.	3	42.1	1	39.4	4	25.3
Let parents know about opportunities for enrollment in special programs within the school system.	4	41.0	9	27.6	7	21.7
Prepare students for going to college.	5	39.5	2	34.1	9	19.6
Help students respect and understand people of all races and cultures.	6	37.5	7	28.5	22	13.9
Offer enjoyable experiences while in school.	7	36.8	20	16.9	15	16.6
Give effective instruction in language art skills such as reading, writing, speaking, and English.	8	36.6	11	26.9	5	24.5
Develop each child's desire to continue learning throughout her or his lifetime.	9	35.9	4	31.4	3	28.4
Provide each child with a sense of responsibility for her or his own actions.	10	35.0	13	26.3	6	24.0
Give each child a good feeling about her or his own cultural background.	11	35.0	14	25.3	23	12.6
Give each child a good feeling about her or himself as a worthwhile person.	12	35.0	12	26.6	8	19.8
Teach children to obey rules and regulations.	13	32.5	8	27.8	11	18.8
Provide effective instruction in mathematics.	14	32.5	10	27.3	13	17.3
Teach students to be concerned about the things that all people in our society need.	15	30.8	18	18.8	18	16.0
Offer a safe, secure school environment.	16	30.0	3	31.6	1	37.9
Develop good personal health and hygiene habits.	17	25.6	15	20.7	27	8.8
Develop each child's ability to cooperate with other people.	18	25.0	17	19.4	16	16.1
Give opportunities for parent participation in the classroom.	19	22.5	28	5.1	28	4.5
Involve parents in decisions about selecting school personnel.	20	22.0	19	17.5	20	14.2
Support the ideals of a child's home and family.	21	20.5	25	13.2	25	10.5
Provide effective instruction in social studies.	22	19.4	27	9.2	24	10.9
Give effective instruction in science.	23	17.9	24	13.3	10	19.4
Involve parents in decisions about selecting curriculum.	24	17.9	21	16.2	19	15.7
Provide useful information about your child's progress.	25	17.5	16	20.3	20	14.2
Offer opportunities in creative subject areas such as art, music, and drama.	26	17.5	22	16.0	16	16.1
Help students develop physically through activities such as physical education, intramural sports, and competitive school teams.	27	15.8	26	10.1	26	10.3
Enable parents to choose their child's teachers.	28	13.2	23	15.0	14	17.2

to services to students of a future-oriented or academic ability nature. This pattern also held for parents who had graduated from high school with their additional concern about a safe, secure school environment which was ranked third. For parents who had graduated from college, the first priority for improvement was the safe, secure school environment. Their other concerns centered upon academic and future-oriented services. None of the groups included social development services in these high priority needs for improvement.

- Parents of Varying B.U.S.D. Involvement -- Parents were asked to describe their involvement in B.U.S.D. schools as active, moderately active, or inactive. Tables 22, 23, and Figure 7 present the varying expectancies of these involvement groups. In Table 22, it can be seen that parents who characterized themselves as being actively involved in B.U.S.D. also specified more services which they felt were in need of improvement. Two services were indicated by over 75% of the actively involved parents: 1) prepare students for getting a good job after high school (78.4%); and 2) offer a safe, secure school environment (75.7%). In addition, over 60% cited the need for increased attention to nine other services: 1) develop good study skills (71.5%); 2) develop the desire to continue learning

Table 22 - Distribution of Responses from Variously Involved Parents in Percentages

Items	Active				Moderately Active				Inactive			
	Needs Much More Attn.	Needs More Attn.	Okay As Is	Needs Less Attn.	Needs Much More Attn.	Needs More Attn.	Okay As Is	Needs Less Attn.	Needs Much More Attn.	Needs More Attn.	Okay As Is	Needs Less Attn.
	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent
Services to Students												
1. Give effective instruction in language arts skills such as reading, writing, speaking, and English.	28.7	40.7	30.0	.7	23.5	35.2	40.6	.7	25.0	30.2	44.3	.5
2. Provide effective instruction in mathematics.	23.7	30.3	44.7	1.3	21.1	35.4	42.8	.7	16.1	34.8	48.5	.5
3. Give effective instruction in science.*	34.9	29.6	34.9	.7	16.0	41.7	41.5	.7	11.9	34.2	53.7	.3
4. Provide effective instruction in social studies.*	18.5	33.1	45.0	3.3	9.2	33.9	55.2	1.7	8.3	30.0	59.2	2.6
5. Offer opportunities in creative subject areas such as art, music, and drama.	18.0	32.7	48.0	1.3	16.3	28.8	52.7	2.2	13.9	23.4	60.4	2.2
6. Help students develop physically through activities such as physical education, intramural sports, and competitive teams.	16.3	22.9	56.9	3.9	10.0	21.4	63.1	5.5	7.1	18.2	68.1	6.6
7. Prepare students for going to college.	30.1	34.1	32.8	2.0	23.4	36.1	38.1	1.2	21.3	34.1	41.3	3.2
8. Prepare students for getting a good job after high school.	42.4	36.0	17.6	4.0	26.7	39.8	31.4	2.2	28.1	36.9	31.1	3.9
9. Give each child a good feeling about her or himself as a worthwhile person.	29.1	31.6	39.3	.0	19.2	32.5	46.6	1.6	21.1	32.8	43.8	2.3
10. Provide each child with a feeling that she or he is capable of learning.	27.5	31.5	40.9	.0	18.9	34.2	46.0	.9	22.5	29.8	47.0	.8
11. Give each child a good feeling about her or his cultural background.	24.5	26.8	41.5	7.3	14.9	24.3	50.3	10.5	14.8	26.2	50.1	8.9
12. Help students respect and understand people of all races and cultures.	20.8	27.5	47.0	4.7	16.7	25.7	52.1	5.5	18.6	27.0	49.1	5.3
13. Develop each child's ability to cooperate with other people.	24.0	32.7	43.3	.0	15.3	31.8	51.1	1.6	15.5	35.0	47.8	1.8
14. Develop good study skills.	37.1	34.4	27.8	.7	27.6	41.7	30.3	.4	31.1	41.4	27.3	.3
15. Develop each child's desire to continue learning learning throughout her or his lifetime.	31.7	39.3	28.3	.7	27.4	41.9	30.5	.2	30.6	41.8	26.5	1.0
16. Provide each child with a sense of responsibility for her or his own actions.	32.4	32.4	34.5	.7	23.4	35.7	39.7	1.3	22.7	37.1	38.9	1.3
17. Teach students to be concerned about the things that all people in our society need.	20.6	35.5	42.6	1.4	16.5	32.0	48.5	3.0	15.3	36.9	44.5	3.3
18. Develop good personal health and hygiene habits.	16.7	26.0	55.3	2.0	11.1	24.4	60.4	4.1	14.4	23.8	58.7	3.1
19. Teach children to obey rules and regulations.	28.8	25.1	39.7	6.3	20.5	24.9	49.2	5.4	18.1	25.4	48.3	8.1
20. Support the ideals of a child's home and family.	16.6	25.9	54.5	2.8	8.3	20.2	65.6	5.8	8.7	18.7	64.1	8.4
21. Offer a safe, secure school environment.	42.8	32.9	23.7	.7	36.4	33.5	29.6	.5	32.7	37.8	29.0	.5
22. Offer enjoyable experiences while in school.	21.7	27.0	50.0	1.3	16.7	32.0	48.2	2.4	15.4	28.1	57.5	3.0
Services to Parents												
1. Give opportunities for parent participation in the classroom.*	12.6	25.2	57.0	5.1	4.0	22.1	68.7	5.2	3.3	18.2	72.2	6.3
2. Provide useful information about your child's progress.	17.2	32.5	47.7	2.6	13.7	32.1	53.1	1.1	17.2	34.0	48.3	.5
3. Involve parents in decisions about selecting school personnel.*	26.0	33.3	36.0	4.7	14.7	31.8	44.5	9.0	11.0	25.6	52.9	10.5
4. Involve parents in decisions about selecting curriculum and instruction.*	24.2	39.6	30.9	5.4	15.0	40.6	38.2	6.1	12.2	30.1	49.5	8.2
5. Enable parents to choose their child's teachers.*	22.3	34.5	35.1	8.1	17.7	31.1	43.5	7.7	12.8	28.3	47.1	11.7
6. Let parents know about opportunities for enrollment in special programs within the school system.	32.0	36.7	30.0	1.3	22.8	35.1	41.0	1.1	20.6	38.3	39.8	1.3
* Statistically different expectations	N ranges from 125 to 153				N ranges from 463 to 561				N ranges from 360 to 406			

Table 23 - Rank Order of Services Rated by Variously Involved Parents as Needing Much More Attention

Services	Active		Moderately Active		Inactive	
	Rank	% NEEDS MUCH MORE ATTENTION	Rank	% NEEDS MUCH MORE ATTENTION	Rank	% NEEDS MUCH MORE ATTENTION
Offer a safe, secure school environment.	1	42.8	1	36.4	1	32.7
Prepare students for getting a good job after high school.	2	42.4	4	26.7	4	28.1
Develop good study skills.	3	37.1	2	27.6	2	31.1
Give effective instruction in science.	4	34.9	18	16.0	23	11.9
Provide each child with a sense of responsibility for her or his own actions.	5	32.4	7	23.4	6	22.7
Let parents know about opportunities for enrollment in special programs within the school system.	6	32.0	8	22.8	10	20.6
Develop each child's desire to continue learning throughout her or his lifetime.	7	31.7	3	27.4	3	30.6
Prepare students for going to college.	8	30.3	6	23.4	8	21.3
Give each child a good feeling about her or himself as a worthwhile person.	9	29.1	11	19.3	9	21.1
Teach children to obey rules and regulations.	10	28.8	10	20.5	12	18.1
Give effective instruction in language arts skills such as reading, writing, speaking and English.	11	28.7	5	23.5	5	25.8
Provide each child with a feeling that she or he is capable of learning.	12	27.5	12	18.9	7	22.5
Involve parents in decisions about selecting school personnel.	13	26.0	22	14.7	24	11.0
Give each child a good feeling about her or his own cultural background.	14	24.5	21	14.9	18	14.8
Involve parents in decisions about selecting curriculum and instruction.	15	24.2	20	15.0	20	14.2
Develop each child's ability to cooperate with other people.	16	24.0	19	15.3	15	15.5
Provide effective instruction in mathematics.	17	23.7	9	21.1	14	16.1
Enable parents to choose their child's teachers.	18	22.3	13	17.7	22	12.0
Offer enjoyable experiences while in school.	19	21.7	15	16.7	16	15.4
Help students respect and understand people of all races and cultures.	20	20.8	14	16.7	11	18.6
Teach students to be concerned about the things that all people in our society need.	21	20.6	16	16.5	17	15.3
Provide effective instruction in social studies.	22	18.5	26	9.2	26	8.3
Offer opportunities in creative subject areas such as art, music and drama.	23	18.0	17	16.3	21	13.9
Provide useful information about your child's progress.	24	17.2	23	13.7	13	17.2
Support the ideals of a child's home and family.	25	16.8	27	8.1	25	8.7
Develop good personal health and hygiene habits.	26	16.7	24	11.1	19	14.4
Help students develop physically through such activities as physical education, intramural sports and competitive school teams.	27	16.3	25	10.0	27	7.1
Give opportunities for parent participation in the classroom.	28	12.6	28	4.6	28	3.3

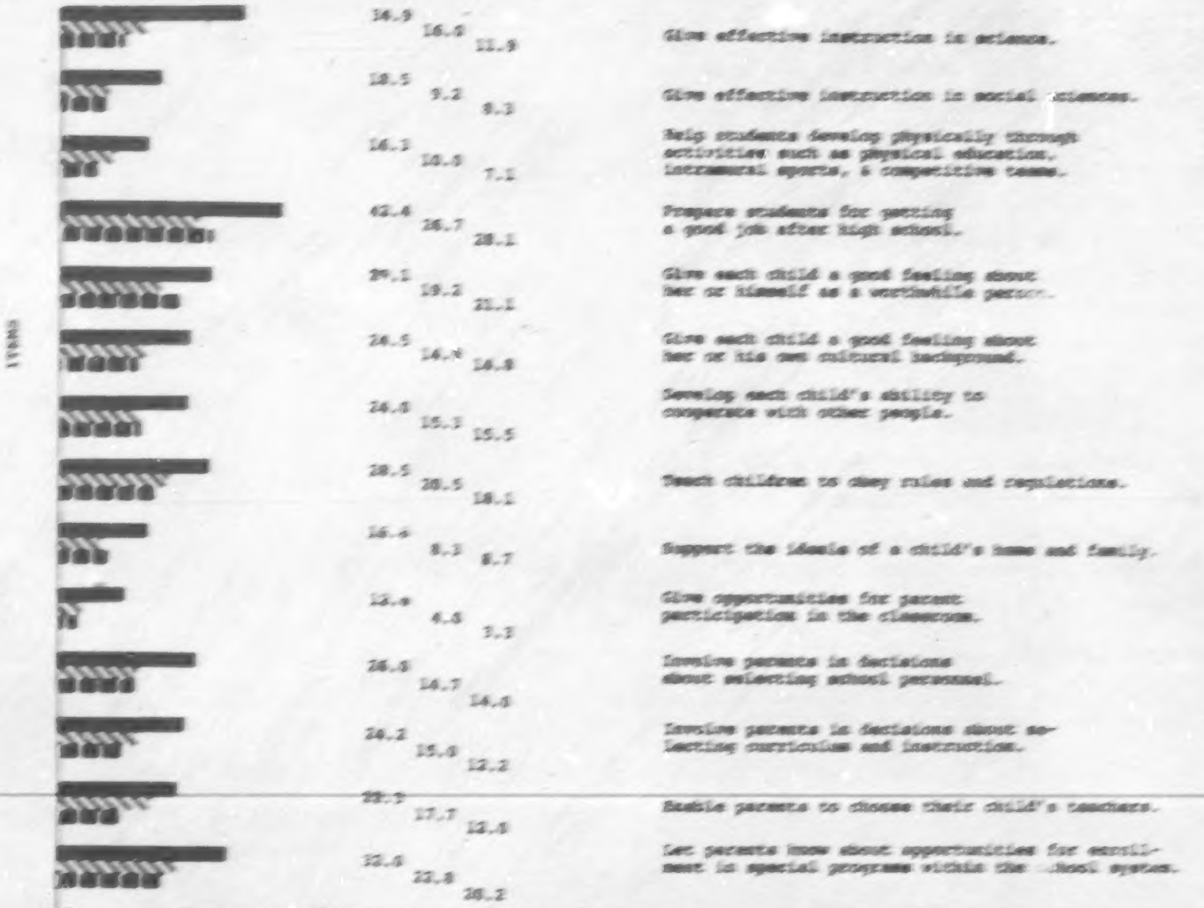

Figure 7 - Distribution of Significantly Different Responses from Variously Involved Parents in Percentages

Legend

■ Active

▨ Moderately Active

▦ Inactive

throughout life (71.0%); 3) give effective instruction in language arts skills (69.4%); 4) let parents know about opportunities for special programs (68.7%): 5) provide each child with a sense of responsibility for her or his own actions (64.8%); 6) give effective instruction in science (64.5%); 7) prepare students for going to college (64.4%); 8) involve parents in decisions about curriculum and instruction (63.8%); 9) give each child a good feeling about her or himself as a worthwhile person (60.9%). They expressed satisfaction with the attention given to: 1) opportunities for parent participation in the classroom (62.3%); and 2) helping students develop physically (60.8%).

Parents who described themselves as moderately active and inactive in B.U.S.D. demonstrated very similar expectancies in terms of the percentage indicating needs in particular service areas. Over 60% of both groups cited the following four services as in need of attention: 1) develop good study skills (69.3% and 72.5% respectively); 2) develop desire to learn throughout life (69.3% and 72.4% respectively); 3) offer a safe, secure school environment (69.9% and 70.6%, respectively); 4) prepare students for getting a good job after high school (66.5% and 65.0%, respectively). These two parent groups also shared the view that adequate attention was given to four services:

1) opportunities for parent participation in the classroom (73.9% and 78.5%, respectively); 2) support the ideals of home and family (71.4% and 72.5%, respectively); 3) develop good personal health and hygiene habits (64.5% and 61.8%, respectively); and 4) help students develop physically (68.6% and 74.7%, respectively). In addition, moderately active parents were satisfied with the development of each child's feelings about her or his own cultural background (60.7%). Additional services about which inactive parents expressed satisfaction were: 1) involve parents in decisions about selecting school personnel (63.4%); 2) opportunities for creative subject areas (62.6%); and 3) provision of effective instruction in social studies (61.8%).

Parent groups who assigned different descriptions of involvement in B.U.S.D. differed in a statistically significant manner on nine services (Table 22 and Figure 7). On each of these services, a higher percentage of active parents indicated that improvement was needed than did moderately active or inactive. This result can be interpreted several ways. Actively involved parents could be more aware of deficits or needs because of their greater first-hand familiarity with B.U.S.D.. Or, active parents could be more vocal as well as more active.

In terms of priorities, all three involvement groups cited a safe, secure school environment as ranking first as a service in need of much more attention (Table 23). Active parents also included three other academic and future-oriented services in their first five ranks for needing much more attention. Also included in this set was the personal development of responsibility. Moderately active and inactive parents assigned all of their first five ranks for increased attention to the same services. Besides school security, they also cited five academic- and future-oriented services.

• • Conclusions -- The results of the parent survey of expectancies for B.U.S.D.'s services to children and parents lead to the following conclusions:

1) The findings of the Parent Survey are summarized in Tables 24 and 25. Table 24 displays the pattern of *needs more* or *needs much more* responses for the various parent groupings. Four of the twenty-eight B.U.S.D. services stand out as being very popularly perceived as needing more attention: (a) prepare students for getting good jobs after high school; (b) develop good study skills; (c) develop each child's desire to continue learning throughout her or his lifetime; and (d) offer

Table 26 - Summary of Services Perceived as Needing More or Much More Attention by Various Parent Groupings

Items	PARENT GROUPINGS																
	All	ESP	Non ESP	El	Sec	Blk	Wht	AI	As	Ch	Oth	LHG	HG	CG	Ac	Mbr	Ldr
Services to Students																	
1. Give effective instruction in language arts skills such as reading, writing, speaking, and English.					X	X						X			X		
2. Provide effective instruction in mathematics.					X	X						X̲					
3. Give effective instruction in science.															X		
4. Provide effective instruction in social studies.																	
5. Offer opportunities in creative subject areas such as art, music, and drama.																	
6. Help students develop physically through activities such as physical education, intramural sports, & competitive teams.																	
7. Prepare students for going to college.					X	X̲						X̲	X		X		
8. Prepare students for getting a good job after high school.	X	X	X	X	X	X̲	X		X			X̲	X̲		X̲	X	X
9. Give each child a good feeling about her or himself as a worthwhile person.					X	X						X̲	X		X		
10. Provide each child with a feeling that she or he is capable of learning.					X	X				X		X	X				
11. Give each child a good feeling about her or his own cultural background.						X						X					
12. Help students respect and understand people of all races and cultures.						X						X					
13. Develop each child's ability to cooperate with other people.						X						X					
14. Develop good study skills.	X	X	X	X	X̲	X̲	X			X		X̲	X		X	X	X
15. Develop each child's desire to continue learning throughout her or his lifetime.	X	X	X	X	X̲	X̲	X					X̲	X		X	X	X
16. Provide each child with a sense of responsibility for her or his own actions.	X		X		X	X						X̲	X		X	X	X
17. Teach students to be concerned about the things that all people in our society need.																	
18. Develop good personal health and hygiene habits.																	
19. Teach children to obey rules and regulations.																	
20. Support the ideals of a child's home and family.																	
21. Offer a safe, secure school environment.	X	X	X	X	X̲	X	X		X	X			X		X̲	X	X
22. Offer enjoyable experiences while in school.												X					
Services to Parents																	
1. Give opportunities for parent participation in the classroom.																	
2. Provide useful information about your child's progress.																	
3. Involve parents in decisions about selecting school personnel.																	
4. Involve parents in decisions about selecting curriculum and instruction.						X									X		
5. Enable parents to choose their child's teachers.																	
6. Let parents know about opportunities for enrollment in special programs within the school system.			X			X						X	X		X		

X Reported by 60% or more respondents X̲ Reported by 75% or more respondents

All=All Parents
ESP=ESP Parents
Non-ESP=Non-ESP Parents
El=Elementary Parents
Sec=Secondary Parents

Blk=Parents, Black Students
Wht=Parents, White Students
AI=Parents, Am. Indian Students
As=Parents, Asian Students

Ch=Parents, Chicano Students
Oth=Parents, Other Students
LHG=Parents, <High School Grad.
HG=Parents, High School Grad.

CG=Parents, College Grad.
Ac=Parents Active in R.U.S.D.

Table 25 - Summary of Services Perceived as Being Okay or Needing Less Attention by Various Parent Groupings

Items	PARENT GROUPINGS																
	All	ESP	Non ESP	El	Sec	Blk	Wht	AI	As	Ch	Oth	LHG	HG	CG	Ac	MAc	InAc
Services to Students																	
1. Give effective instruction in language arts skills such as reading, writing, speaking, and English.																	
2. Provide effective instruction in mathematics.								●̲			●						
3. Give effective instruction in science.											●						
4. Provide effective instruction in social studies.								●̲	●		●̲						●
5. Offer opportunities in creative subject areas such as art, music, and drama.					●	●		●̲	●		●						●
6. Help students develop physically through activities such as physical education, intramural sports, & competitive teams.	●	●	●	●		●	●		●		●̲	●	●	●	●	●	●
7. Prepare students for going to college.							●										
8. Prepare students for getting a good job after high school.								●̲									
9. Give each child a good feeling about her or himself as a worthwhile person.																	
10. Provide each child with a feeling that she or he is capable of learning.											●						
11. Give each child a good feeling about her or his own cultural background.		●		●			●	●̲			●			●		●	
12. Help students respect and understand people of all races and cultures.							●	●̲			●			●			
13. Develop each child's ability to cooperate with other people.								●̲									
14. Develop good study skills.																	
15. Develop each child's desire to continue learning throughout her or his lifetime.																	
16. Provide each child with a sense of responsibility for her or his own actions.								●̲			●						
17. Teach students to be concerned about the things that all people in our society need.								●̲			●						
18. Develop good personal health and hygiene habits.	●	●	●	●			●	●̲		●	●̲			●		●	●
19. Teach children to obey rules and regulations.				●		●				●							
20. Support the ideals of a child's home and family.	●	●	●	●	●		●̲	●̲	●	●	●̲		●	●		●	●
21. Offer a safe, secure school environment.																	
22. Offer enjoyable experiences while in school.				●													
Services to Parents																	
1. Give opportunities for parent participation in the classroom.	●	●	●	●	●		●̲		●̲	●	●̲		●	●̲	●	●	●̲
2. Provide useful information about your child's progress.																	
3. Involve parents in decisions about selecting school personnel.								●̲	●								●
4. Involve parents in decisions about selecting curriculum and instruction.									●		●						
5. Enable parents to choose their child's teachers.									●		●		●				
6. Let parents know about opportunities for enrollment in special programs within the school system.											●						

● Reported by 60% or more respondents　●̲ Reported by 75% or more respondents

All=All Parents
ESP=ESP Parents
Non-ESP=Non-ESP Parents
El=Elementary Parents
Sec=Secondary Parents

Blk=Parents, Black Students
Wht=Parents, White Students
AI=Parents, Am. Indian Students
As=Parents, Asian Students

Ch=Parents, Chicano Students
Oth=Parents, Other Students
LHG=Parents,   High School Grad.
HG=Parents, High School Grad.

CG=Parents, College Grad.
Ac=Parents Active in B.U.S.D.
MAc=Parents Mod. Active in B.U.S.D
InAc=Parents Inactive in B.U.S.D.

a safe, secure school environment. In considering the sentiment for these improvements, it is important to recognize that each parent respondent is represented once in each of six clusters of parent groupings. Nevertheless, the visual representation provided by Table 24 makes it clear that these are the services recommended for improvement by most groupings of B.U.S.D. parents. One of these services (offer a safe, secure school environment) certainly raises serious issues for B.U.S.D. policy, because it speaks to the potential physical jeopardy and well being of B.U.S.D. children; and, therefore deserves considerable contemplation and further investigation. Fully 36% of the parents felt that much more attention should be given to providing safe and secure schools. Clearly then, parents are worried about violence or the threat of violence in the schools and thus reflect concerns similar to those expressed by parents in urban school districts all across the country. Importantly, it is not one or two groups of parents who are concerned with safety and security in the schools. Rather, these apprehensions are virtually universal across parent groupings.

The other three popularly cited services for improvement (getting good jobs after high school, developing good study skills, and developing a lifelong desire for learning) would appear to be practical and future-oriented in nature. A completely clear interpretation is precluded by the generality in purpose of this study. But these expressed needs would seem to reflect interest in some degree of emphasis on vocational approaches for all types of students and an attitude that students should be persuaded to accept an almost continual renewal and expansion of skills and knowledge. Further, these sentiments on the part of parents suggest that competence in the techniques and strategies of acquiring these skills and knowledge should be fostered. Perhaps it also suggests that in today's economically insecure environment, parents are more interested in optimizing the future security of their children than in optimizing the positive experience of the school process itself. The survey results also showed that parents wanted to see improvement in reading and language arts instruction more than in any other subject area, with improvement in social studies receiving a particularly low priority. This would seem to indicate a general concern on the part of parents about the delivery of basic skills.

Importantly, the survey findings also indicated that parental expectations varied both in degree and kind as a function of certain demographic and school variables. Parents of elementary children generally felt more satisfied with the current services than did parents of secondary students. These perceptions are consistent with student achievement data which have indicated over the years that elementary children were performing better than did the secondary students. Similarly, Black parents are much less satisfied with current services than are White parents, and the priorities of the two groups are quite different. Black parents are more concerned than White parents about college preparation. This may not be surprising since fewer Black students go to college than Whites. The variation between races is even more evident when one compares the degree of concern about safety and security that the two groups expressed. Finally, White parents are more interested in improving science and creative arts than are Blacks. This finding suggests that in the academic areas, Whites are relatively more comfortable than Blacks with the current delivery of basic skills instruction, especially in reading and math; and, thus, are more interested in extending instructional effectiveness in the other academic areas as well.

2) Table 25 demonstrates that parents of B.U.S.D. students are not wholly dissatisfied with the services provided to themselves and their children. Four or five services have been prominantly rated as being satisfactory or perhaps deserving even less attention than is presently the case: (a) help students develop physically through activities such as physical education, intramural sports, and competitive school teams; (b) develop good personal health and hygiene habits; (c) support the ideals of a child's home and family; (d) give opportunities for parent participation in the classroom; and (e) give each child a good feeling about her or his own cultural background. It would appear from these results that the current nature and level of B.U.S.D. efforts in these areas are viewed as highly appropriate by most parent groupings.

- **Teacher Expectancies - Results and Discussion** -- The teacher expectancies survey was part of the Teacher Survey distributed to all Kindergarten through Twelfth Grade basic skills teachers. It is essentially the same instrument given to parents. Identifying information on each teacher included ESP or Non-ESP status, school, and grade level. The distribution of respondents is presented in Table 26 below.

Table 26. Distribution of Respondents to Teacher Survey, Part I

Grade or Program	Percent Respondents
Kindergarten - Third	38.7
Fourth - Sixth	24.1
Seventh - Ninth	19.0
Tenth - Twelfth	18.2
ESP	22.3
Non-ESP	77.7

- - **All Teacher Respondents** -- Table 26: II presents a frequency distribution for each item for all completed surveys, and Table 27 presents a rank order of the items based upon the percentage checking *needs much more attention.* For 50% of the twenty-two child-focused services, the majority of teachers (defined as 60% or more) felt that either more or much more attention is needed. This finding is similar to

Table 26_b. Distribution of All Teacher Survey-Part I Responses in Percentages

Items	*NEEDS MUCH MORE ATTENTION* Percent	*NEEDS MORE ATTENTION* Percent	*OKAY AS IS* Percent	*NEEDS LESS ATTENTION* Percent
1. Give effective instruction in language arts skills such as reading, writing, speaking & English.	21.6	48.2	29.1	1.1
2. Provide effective instruction in mathematics.	14.6	40.0	43.9	1.4
3. Give effective instruction in science.	22.2	37.3	39.7	.9
4. Provide effective instruction in social studies.	11.6	38.2	47.1	3.2
5. Offer opportunities in creative subject areas such as art, music & drama.	21.5	31.0	44.4	3.1
6. Help students develop physically through activities such as physical education, intramural sports & competitive school teams	14.4	28.7	49.9	7.0
7. Prepare students for going to college.	16.7	37.5	44.1	1.7
8. Prepare students for getting a good job after high school.	29.3	50.9	19.2	.6
9. Give each child a good feeling about her or himself as a worthwhile person.	19.4	40.8	38.3	1.4
10. Provide each child with a feeling that she or he is capable of learning.	16.5	45.1	37.8	.6
11. Give each child a good feeling about her or his own cultural background.	13.4	33.5	48.9	4.2
12. Help students respect & understand people of all races & cultures.	19.4	37.1	42.1	1.4
13. Develop each child's ability to cooperate with other people.	25.2	47.3	26.9	.6
14. Develop good study skills.	34.9	47.8	17.0	.3
15. Develop each child's desire to continue learning throughout her or his lifetime.	29.1	47.4	23.1	.3
16. Provide each child with a sense of responsibility for her or his own actions.	36.2	46.5	17.0	.3
17. Teach students to be concerned about the things that all people in our society need.	25.1	46.9	26.6	1.4
18. Develop good personal health & hygiene habits.	15.2	43.5	39.6	1.7
19. Teach children to obey rules & regulations.	26.7	46.3	25.3	1.7
20. Support the ideals of a child's home & family.	9.6	36.2	50.9	3.3
21. Offer a safe, secure school environment.	25.1	45.9	27.6	1.4
22. Offer enjoyable experiences while in school.	13.2	43.3	41.9	1.7
23. Give opportunities for parent participation in the classroom.	9.4	26.9	60.3	3.3
24. Provide useful information about your child's progress.	8.3	26.0	64.6	1.1
25. Involve parents in decisions about selecting school personnel.	5.6	18.5	56.5	19.4
26. Involve parents in decisions about selecting curriculum & instruction.	5.6	21.5	54.5	18.4
27. Enable parents to choose their child's teachers.	5.6	16.4	54.3	23.7
28. Let parents know about opportunities for enrollment in special programs within the school system.	12.6	33.1	52.0	2.2

Table 27. Rank Order of Services Perceived as Needing Much More Attention by All Teacher Survey Respondents

Item	Rank	Percent
Provide each child with a sense of responsibility for her or his own actions	1	36.2
Develop good study skills	2	34.9
Prepare students for getting a good job after high school	3	29.3
Develop each child's desire to continue learning throughout her or his lifetime	4	29.1
Teach children to obey rules and regulations	5	26.7
Develop each child's ability to cooperate with other people	6	25.2
Offer a safe, secure school environment	7	25.1
Teach students to be concerned about the things that all people in our society need	7	25.1
Give effective instruction in science	9	22.2
Give effective instruction in language arts skills such as reading, writing, speaking, English	10	21.6
Offer opportunities in creative subject areas such as art, music, and drama	11	21.5
Give each child a good feeling about her or himself as a worthwhile person.	12	19.4
Help students respect and understand people of all races and cultures	12	19.4
Prepare students for going to college	14	16.7
Provide each child with a feeling that she or he is capable of learning	15	16.5
Develop good personal health and hygiene habits	16	15.2
Provide effective instruction in mathematics	17	14.6
Help students develop physically through activities such as physical education, intramural sports, and competitive teams	18	14.4
Give each child a good feeling about her or his own cultural background	19	13.4
Offer enjoyable experiences while in school	20	13.2
Let parents know about opportunities for enrollment in special programs within the school system	21	12.6
Provide effective instruction in social studies	22	11.6
Support the ideals of a child's home and family	23	9.6
Give opportunities for parent participation in the classroom	24	9.4
Provide useful information about your child's progress	25	8.3
Involve parents in decisions about selecting school personnel	26	5.6
Involve parents in decisions about selecting curriculum and instruction	26	5.6
Enable parents to choose their child's teachers	26	5.6

results obtained with parents. However, for most of the six parent-focused services (83.3%), a majority of teachers felt that the current level of attention was sufficient.

The teacher expectations which were related directly to academic concerns (Items 1-5) varied from a low of 11.6% teachers who wanted much more attention given to social studies, to a high of 21.6% who wanted much more attention given to reading and language arts. Expectations related to future outcomes (Items 7, 8, 14, 15) varied from a low of 16.7% teachers who wanted much more attention given to college preparation to a high of 34.8% who wanted much more attention given to the development of good study skills. Expectations related to personal and social development and to school environment (Items 6, 9-13, 16-22) varied from a low of 9.6% teachers who wanted much more attention given to supporting home and family ideals, to a high of 36.2% who wanted much more attention given to providing each child with a sense of responsibility about her or his own actions.

The trend was in the opposite direction for those items related to parent services (Items 1-6). More specifically, only 5.6% felt that much more attention should be given to activities which involve parents and school personnel in decisions, which involve parents in the selection of curriculum and instruction, and which enable parents to choose the teachers for their own child; whereas the majority of teachers (60% or more) felt that adequate attention or more attention than was needed had been given to these areas of parental involvement.

As indicated in Table 27, there was a wide range of teacher priorities for improvement. The rank order of priorities indicated that teachers were most concerned that each child should be provided with a sense of responsibility for her/his own actions. Thirty-six percent of the teachers wanted much more attention given to this service. The next three priorities, developing good study skills (34.9%), preparing for jobs (29.3%), and developing the desire for lifelong learning (29.1%), all relate to future student outcomes. Ranks 5 through 8 all relate to personal, social, and school environment services as follows: teaching children to obey rules and regulations (26.7%), developing the ability to cooperate with others (25.2%), offering a safe, secure environment (25.1%), and teaching students to be concerned about society's needs (25.1%). Ranks 9 through 11 all relate to direct academic services as follows: effective instruction in science (22.2%), effective instruction in reading and language arts (21.6%), and offering creative subjects (21.5%). Finally, the rankings indicate that teachers felt that enough attention (and to some extent too much attention) was being given to the services related to parents.

- ESP and Non-ESP Teacher Groups -- Figure 8 and Table 28 present the comparisons among ESP and Non-ESP teachers, and Table 29 presents the rank order of the services needing much more attention. Those items which were rated as needing more or much more attention by the majority of ESP teachers also displayed a very similar profile among Non-ESP teachers. Both groups of teachers indicated that they found those areas concerning parental involvement in administrative decisions, parental participation in the classroom, and feedback to parents regarding their child's progress to be adequate at their current levels or needing less attention. The rank ordering of these five items, when scores were combined, was identical in ESP and Non-ESP groups, with slightly higher percentages appearing in the Non-ESP group. Similarly, in the twenty-two child-focused items, 76.9% of the items which the majority of ESP teachers had rated as needing more attention or much more attention were also rated as needing more or much attention by the majority of the Non-ESP teachers. The

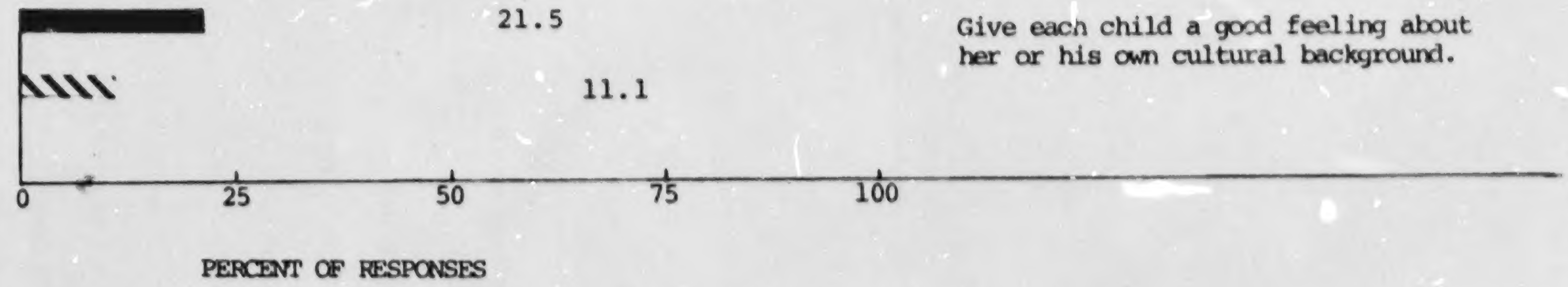

Figure 8 . Distribution of Significantly Different Responses from ESP and Non-ESP Teachers in Percentages

Legend

■ ESP

▨ Non-ESP

Table 28. Distribution of Teacher Survey Responses in Percentages by ESP and Non-ESP Teachers

Items	ESP				Non-ESP			
	Needs Much More Attn. Percent	*Needs More Attn.* Percent	*Okay As Is* Percent	*Needs Less Attn.* Percent	*Needs Much More Attn.* Percent	*Needs More Attn.* Percent	*Okay As Is* Percent	*Needs Less Attn.* Percent
Services to Students								
1. Give effective instruction in language arts skills such as reading, writing, speaking, and English.	26.0	53.2	20.8	--	20.4	46.8	31.4	1.4
2. Provide effective instruction in mathematics.	20.3	41.8	36.7	1.3	13.0	39.5	46.0	1.4
3. Give effective instruction in science.	18.2	40.3	41.6	--	23.3	36.5	39.1	1.1
4. Provide effective instruction in social studies.	6.5	49.4	40.3	3.9	13.0	34.9	49.1	3.0
5. Offer opportunities in creative subject areas such as art, music, and drama.	27.6	28.9	40.8	2.6	19.9	31.6	45.4	3.2
6. Help students develop physically through activities such as physical education, intramural sports, and competitive teams.	10.5	30.3	55.3	3.9	15.4	28.3	48.4	7.9
7. Prepare students for going to college.	10.7	40.0	49.3	--	18.4	36.8	42.6	2.2
8. Prepare students for getting a good job after high school.	29.7	52.7	16.2	1.4	29.2	50.4	20.1	0.4
9. Give each child a good feeling about her or himself as a worthwhile person.	22.8	41.8	34.2	1.3	18.5	40.6	39.5	1.4
10. Provide each child with a feeling.	22.8	41.8	35.4	--	14.7	46.0	38.5	0.7
11. Give each child a good feeling about her or his own cultural background.	21.5	29.1	46.8	2.5	11.1	34.8	49.5	4.7
12. Help students respect and understand people of all races and cultures.	21.3	33.8	43.8	1.3	18.9	38.1	41.6	1.4
13. Develop each child's ability to cooperate with other people.	27.8	43.0	29.1	--	24.5	48.6	26.3	0.7
14. Develop good study skills	35.9	48.7	15.4-	--	34.6	47.5	17.5	0.4
15. Develop each child's desire to continue learning throughout her or his lifetime.	34.6	39.7	25.6	--	27.6	49.6	22.4	0.4
16. Provide each child with a sense of responsibility for her or his own actions.	40.0	42.5	17.5	--	35.1	47.7	16.8	0.4
17. Teach students to be concerned about the things that all people in our society need.	27.5	43.8	28.8	--	24.5	47.8	25.9	1.8
18. Develop good personal health and hygiene habits.	20.3	36.7	41.8	1.3	13.7	45.5	39.0	1.8
19. Teach children to obey rules and regulations.	22.1	46.8	24.7	6.5	28.0	46.2	25.4	0.4
20. Support the ideals of a child's home and family.	12.3	38.4	45.2	4.1	8.8	35.6	52.5	3.1
21. Offer a safe, secure school environment.	21.5	49.4	27.8	1.3	26.3	44.9	27.6	1.4
22. Offer enjoyable experiences while in school.	15.6	45.5	37.7	1.3	12.5	42.7	43.0	1.8
Services to Parents								
1. Give opportunities for parent participation in the classroom.	8.8	30.0	57.5	3.8	9.6	26.1	61.1	3.2
2. Provide useful information about your child's progress.	6.4	29.5	64.1	--	8.8	25.0	64.8	1.4
3. Involve parents in decisions about selecting school personnel.	7.5	22.5	55.0	15[illegible]	5.1	17.4	56.9	20.7
4. Involve parents in decisions about selecting curriculum and instruction.	5.0	28.8	53.8	12.5	5.8	19.4	54.7	20.1
5. Enable parents to choose their child's teachers.	7.7	21.8	53.8	16.7	5.0	14.9	54.4	25.6
6. Let parents know about opportunities for enrollment in special programs within the school system.	17.5	41.3	41.3	--	11.2	30.8	55.1	2.9

Table 29. Rank Order of Services Perceived As Needing Much More Attention by ESP and NON-ESP Teachers

Items	ESP		NON-ESP	
	Rank	NEEDS MUCH MORE ATTENTION Percent	Rank	NEEDS MUCH MORE ATTENTION Percent
Provide each child with a sense of responsibility for her or his own actions.	1	40.0	1	35.1
Develop good study skills.	2	35.9	2	34.6
Develop each child's desire to continue learning throughout her or his lifetime.	3	34.6	5	27.6
Prepare students for getting a good job after high school.	4	29.7	3	29.2
Offer opportunities in creative subject areas such as art, music, and drama.	5	27.6	11	19.9
Teach students to be concerned about the things that all people in our society need.	6	27.5	7	24.5
Develop each child's ability to cooperate with other people.	7	27.8	7	24.5
Give effective instruction in language arts skills such as reading, writing, speaking & English.	8	26.0	10	20.4
Provide each child with a feeling that she or he is capable of learning.	9	22.8	16	14.7
Give each child a good feeling about her or himself as a worthwhile person.	9	22.8	13	18.5
Teach children to obey rules and regulations.	11	22.1	4	28.0
Offer a safe, secure school environment.	12	21.5	6	26.1
Give each child a good feeling about her or his own cultural background.	12	21.5	22	11.1
Help students respect and understand people of all races and cultures.	14	21.3	12	18.9
Develop good personal health and hygiene habits.	15	20.3	17	13.7
Provide effective instruction in mathematics	15	20.3	18	13.0
Give effective instruction in science.	17	18.2	9	23.3
Let parents know about opportunities for enrollment in special programs within the school system.	18	17.5	21	11.2
Offer enjoyable experiences while in school.	19	15.6	20	12.5
Support the ideals of a child's home & family.	20	12.3	24	8.8
Prepare students for going to college.	21	10.7	14	18.4
Help students develop physically through activities such as physical education, intramural sports, & competitive teams.	22	10.5	15	15.4
Give opportunities for parent participation in the classroom.	23	8.8	23	9.6
Enable parents to choose their child's teachers.	24	7.7	27	5.0
Involve parents in decisions about selecting school personnel.	25	7.5	28	5.1
Provide effective instruction in social studies.	26	6.5	18	13.0
Provide useful information about your child's progress.	27	6.4	24	8.8
Involve parents in decisions about selecting curriculum & instruction.	28	5.0	26	5.8

expectancies for these teacher groups differed significantly only with respect to the additional attention deemed desirable by Non-ESP teachers to give each child a good feeling about her or his own cultural background, and a lower interest on the part of ESP teachers in stressing physical activities.

- Teachers of Varying Grades -- Teachers' ratings were divided into grade groupings for purposes of comparison, with some interesting results. Figure 9 presents the comparisons among teachers for the Kindergarten through Third, Fourth through Sixth, Seventh through Ninth, and Tenth through Twelfth grade configurations. The findings indicate that in eight of the twenty-eight services the four groups hold markedly different expectancies. Especially dramatic were the differences in perceived need for attention to effective instruction in science and the development of good study skills.

Table 30 and 31 present the distribution and rank order of teachers' responses in the various grade groups. Table 32 and 33 summarize these results. As can be seen, there is great uniformity across grade levels in the teachers' perception of needs. Of prime concern at all grade levels was the notion of the

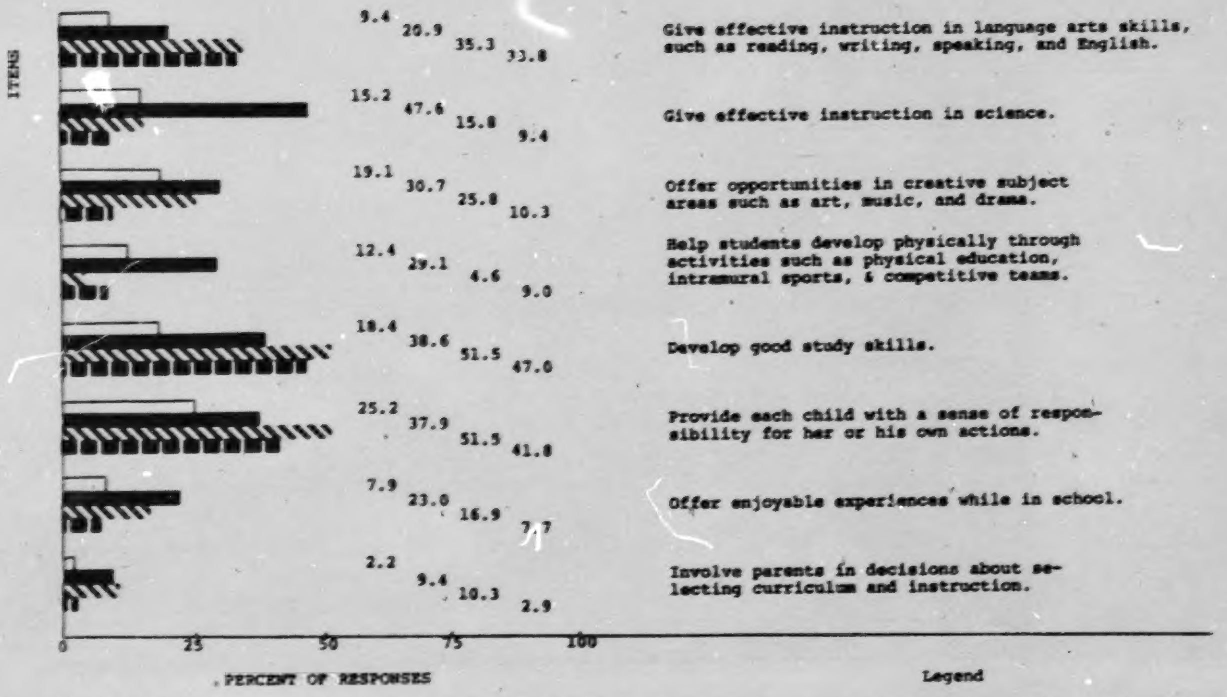

Figure 9 - Distribution of Significantly Different Responses from Teachers of Various Grade Groupings in Percentages

Items	Grades Kindergarten-One				Grades Four-Six				Grades Seven-Nine				Grades Ten-Twelve			
	Needs Much More Attn.	Needs More Attn.	Okay As Is	Needs Less Attn.	Needs Much More Attn.	Needs More Attn.	Okay As Is	Needs Less Attn.	Needs Much More Attn.	Needs More Attn.	Okay As Is	Needs Less Attn.	Needs Much More Attn.	Needs More Attn.	Okay As Is	Needs Less Attn.
	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent
Services to Students																
1. Give effective instruction in language arts skills such as reading, writing, speaking, and English.	9.4	48.6	40.6	1.4	20.9	52.3	26.7	--	35.3	47.1	14.7	2.9	33.8	43.1	23.1	--
2. Provide effective instruction in mathematics.	18.0	44.3	34.4	3.3	13.4	35.8	49.3	1.5	10.7	36.4	52.1	0.7	19.5	46.0	33.3	1.1
3. Give effective instruction in science.	15.2	39.9	44.9	--	47.6	36.9	14.3	1.2	15.8	36.8	43.9	3.5	9.4	32.8	57.8	--
4. Provide effective instruction in social studies.	9.6	36.0	51.5	2.9	16.3	40.7	41.9	1.2	16.7	41.7	38.3	3.3	4.7	35.9	53.1	6.3
5. Offer opportunities in creative subject areas such as art, music, and drama.	19.1	36.0	43.4	1.5	30.7	38.6	27.3	3.4	25.8	19.7	50.0	4.5	10.3	22.1	63.2	4.4
6. Help students develop physically through activities such as physical education, intramural sports, and competitive school teams.	12.4	38.0	44.5	5.1	29.1	34.9	31.4	4.7	4.6	15.4	67.7	12.3	9.0	14.9	67.2	9.0
7. Prepare students for going to college.	15.6	32.0	50.8	1.6	24.1	45.8	30.1	--	13.2	38.2	42.6	5.9	13.2	36.8	50.0	--
8. Prepare students for getting good jobs after high school.	24.2	48.4	25.8	1.6	37.0	45.7	17.3	--	28.4	58.2	13.4	--	30.3	54.5	15.2	--
9. Give each child a good feeling about her or himself as a worthwhile person.	15.7	37.1	46.4	0.7	28.7	41.4	29.9	--	19.1	48.5	29.4	2.9	15.4	40.0	41.5	3.1
10. Provide each child with a feeling that she or he is capable of learning.	10.8	39.6	48.9	0.7	21.8	49.4	28.7	--	20.0	53.8	24.6	1.5	18.2	42.4	39.4	--
11. Give each child a good feeling about her or his own cultural background.	10.1	37.0	50.0	2.9	18.6	39.5	41.9	--	8.8	29.4	52.9	8.8	18.2	22.7	51.5	7.6
12. Help students respect and understand people of all races and cultures.	15.8	32.4	51.1	0.7	26.4	42.5	31.0	--	14.7	38.2	44.1	2.9	22.4	38.8	35.8	3.0
13. Develop each child's ability to cooperate with other people.	17.5	45.3	36.5	0.7	32.2	52.9	14.8	--	28.4	47.8	22.4	1.5	28.8	43.9	27.3	--
14. Develop good study skills.	18.4	51.5	29.4	0.7	38.6	47.7	13.6	--	51.5	45.6	2.9	--	47.0	42.4	10.6	--
15. Develop each child's desire to continue learning throughout her or his lifetime.	21.3	41.2	36.8	0.7	36.5	48.2	15.3	--	29.7	57.8	12.5	--	35.4	49.2	15.4	--
16. Provide each child with a sense of responsibility for her or his own actions.	25.2	48.9	25.9	--	37.9	52.9	9.2	--	51.5	37.9	9.1	1.5	41.8	41.8	16.4	--
17. Teach students to be concerned about the things that all people in our society need.	19.7	46.0	32.8	1.5	33.7	46.5	19.8	--	25.0	48.4	23.4	3.1	25.4	47.8	25.4	1.5
18. Develop good personal health and hygiene habits.	15.0	35.7	47.1	2.1	20.7	52.9	25.3	1.1	9.4	45.3	43.8	1.6	13.8	46.2	38.5	1.5
19. Teach children to obey rules and regulations.	22.3	37.4	39.6	0.7	31.0	51.7	16.1	1.1	36.4	53.0	7.6	3.0	20.3	51.6	25.0	3.1
20. Support the ideals of a child's home and family.	6.7	31.1	60.0	2.2	13.3	47.0	38.6	1.2	13.3	35.0	45.0	6.7	7.1	33.9	53.6	5.4
21. Offer a safe, secure school environment.	19.6	36.2	42.8	1.4	32.6	46.1	20.2	1.1	23.5	61.8	14.7	--	28.4	49.3	19.4	3.0
22. Offer enjoyable experiences while in school.	7.9	34.5	57.6	--	23.0	42.5	31.0	3.4	16.9	55.4	26.2	1.5	7.7	50.8	38.5	3.1
Services to Parents																
1. Give opportunities for parent participation in the classroom.	10.0	20.0	67.9	2.1	11.6	37.2	51.2	--	6.1	28.8	60.6	4.5	8.8	26.5	55.9	8.8
2. Provide useful information to parents about their child's progress.	6.5	23.2	70.3		9.1	36.4	53.4	1.1	13.2	25.0	61.8	--	5.9	19.1	70.6	4.4
3. Involve parents in decisions about selecting school personnel.	2.9	15.9	65.2	--	9.6	24.1	50.6	15.7	7.5	13.4	50.7	28.4	4.4	22.1	51.5	22.1
4. Involve parents in decisions about selecting curriculum and instruction.	2.2	19.0	61.3	17.5	9.4	28.2	44.7	17.6	10.3	13.2	58.8	17.6	2.9	26.5	48.5	22.1
5. Enable parents to choose their child's teachers.	5.0	6.5	69.1	19.4	7.0	29.1	37.2	26.7	8.8	17.6	45.6	27.9	1.5	19.8	54.5	24.2
6. Let parents know about opportunities for enrollment in special programs within the school system	9.4	33.1	55.4	2.2	17.4	39.5	38.4	4.7	10.6	27.3	60.6	1.5	15.4	10.8	73.8	

Table 31 · Rank Order of Services Perceived As Needing Much More Attention by Teachers of Varying Grade Grouping

Items	Grade Kind.-Three		Grades Four-Six		Grades Seven-Nine		Grades Ten-Twelve	
	Rank	Needs Much More Attn. Percent	Rank	Needs Much More Attn. Percent	Rank	Needs Much More Attn. Percent	Rank	Needs Much More Attn. Percent
Services to Students								
1. Provide each child with a sense of responsibility for her or his own actions.	1	25.2	3	37.9	2	51.5	2	41.8
2. Prepare students for getting a good job after high school.	2	24.2	4	37.0	7	28.4	5	30.3
3. Teach children to obey rules and regulations.	3	22.3	9	31.0	3	36.4	10	20.3
4. Develop each child's desire to continue learning throughout her or his lifetime.	4	21.3	5	36.5	5	29.7	3	35.4
5. Teach students to be concerned about the things that all people in our society need.	5	19.7	5	33.7	9	25.9	8	25.4
6. Offer a safe, secure, school environment.	6	19.6	7	32.6	10	23.5	7	28.4
7. Offer opportunities in creative subject areas such as art, music, and drama.	7	19.1	10	30.7	8	25.8	18	10.3
8. Develop good study skills.	8	18.4	2	38.6	1	51.5	1	47.0
9. Develop each child's ability to cooperate with other people.	9	17.5	8	32.2	6	28.4	6	28.8
10. Help students respect and understand people of all races and cultrues.	10	15.8	13	26.4	17	14.7	9	22.4
11. Give each child a good feeling about her or himself as a worthwhile person.	11	15.7	12	28.7	12	19.1	13	15.4
12. Prepare students for going to college.	12	15.6	14	24.1	19	13.2	17	13.2
13. Give effective instruction in science.	13	15.2	1	47.6	16	15.8	19	9.4
14. Develop good personal health and hygiene habits.	14	15.0	18	20.7	23	9.4	15	13.8
15. Help students develop physically through activities such as physical education, intramural sports, and competitive school teams.	15	12.4	11	29.1	28	4.6	20	9.0
16. Provide each child with a feeling that she or he is capable of learning.	16	10.8	16	21.8	11	20.0	11	18.2
17. Provide effective instruction in mathematics.	17	10.7	19	19.5	13	18.0	16	13.4
18. Give each child a good feeling about her or his own cultural background.	18	10.1	20	18.6	24	8.8	12	18.2
19. Give opportunities for parent participation in the classroom.	19	10.0	24	11.6	27	6.1	21	8.8
20. Provide effective instruction in social studies.	20	9.6	22	16.3	15	16.7	25	4.7
21. Give effective instruction in language arts skills such as reading, writing, speaking, and English.	21	9.4	17	20.9	4	35.3	4	33.8
22. Let parents know about opportunities for enrollment in special programs within the school system.	21	9.4	21	17.4	21	10.6	14	15.4
23. Offer enjoyable experiences while in school.	23	7.9	15	23.0	14	16.9	22	7.7
24. Support the ideals of a child's home and family.	24	6.7	23	13.3	18	13.3	23	7.1
25. Provide useful information about your child's progress.	25	6.5	27	9.1	20	13.2	24	5.9
26. Enable parents to choose their child's teachers.	26	5.0	28	7.0	25	8.8	28	1.5
27. Involve parents in decisions about selecting school personnel.	27	2.9	25	9.6	26	7.5	26	4.4
28. Involve parents in decisions about selecting curriculum and instruction.	28	2.2	26	9.4	22	10.3	27	2.9

internalization of norms, discipline, and motivation by the students. Items concerned with this aspect of the educational process were consistently rated as needing much more attention. Teachers' concern appears to peak during grades Seven through Nine, with 73% to 97% of the teachers expressing need for attention to these areas.

Teachers of Kindergarten through Third grade expressed the need for more attention to only 31.8% of the areas of inquiry. A higher percentage of these teachers expressed satisfaction with parental involvement and in more areas of involvement than any other group, although the general trend was quite similar in most groups.

The involvement of parents in school personnel, curriculum and instruction decisions was felt to be adequate by over 60% of Fourth through Sixth grade teachers. However, 37% to 56% of this group felt more attention was needed in other areas of parental involvement, such as classroom participation and providing useful information to the parents on their child's progress. For no other grade grouping was there this expression of inadequacies or level of concern in the area of parental involvement. On the contrary, 61% to 88% of teachers were quite satisfied with these aspects.

Also of note for the group of Fourth through Sixth grade teachers was the overwhelming concern expressed by the majority of teachers in almost all areas. 81.8% of the child-focused items were rated as needing more or much more attention by majority of teachers. This level of concern is contrasted with 31.8%, 50%, and 58.1% of the items in other groups rated as needing attention.

There was little concern over the adequacy of instruction or curriculum in any grade group except Fourth through Sixth grades, but there were slight differences in emphasis. Kindergarten through Third and Fourth through Sixth grade teachers were more concerned about improvement in offering Opportunities in creative areas than were the Seventh through Ninth or the Tenth through Twelfth grade teachers. They also were more concerned about helping students develop physically and learning to compete. Fourth through Sixth grade teachers were dramatically more concerned than were the other three groups about providing effective instruction in science. Tenth through Twelfth grade teachers were more concerned than were the other three groups about giving the child a good feeling about his/her own cultural background. Seventh through Ninth grade teachers were more concerned than were other groups, particularly the Tenth through Twelfth grade teachers, about providing effective instruction in social studies. Finally, both Seventh through Ninth and Tenth through Twelfth grade teachers were more concerned about effective language arts instruction than were teachers in either of the elementary grade groupings.

● ● Conclusions -- The findings from the expectancy portion of the Teachers Survey suggest that:

1) For most of the child-related services identified in the survey a majority of teachers felt that either more attention or much more attention was needed. This indicated that teachers, as well as parents, wanted some improvements made in the B.U.S.D. services directed at children.
2) On the other hand, for the parent-focused services, a majority of teachers felt that the current levels of service were sufficient, including 16.7% of whom felt that less attention should be paid to these areas. This suggests that teachers feel no need for more participation and control to be given to parents, particularly in the areas of personnel, curriculum, and instructional policy and decision-making.
3) The services which teachers ranked as high pri-

Table 32. Summary of Services Perceived as Needing More or Much More Attention by Various Teacher Groupings

Items	TEACHER GROUPINGS						
	All	ESP	NON-ESP	K-3 GRADES	4-6 GRADES	7-9 GRADES	10-12 GRADES
Services to Students							
1. Give effective instruction in language arts skills such as reading, writing, speaking & English.	X	X	X		X	X	X
2. Provide effective instruction in mathematics.		X		X			X
3. Give effective instruction in science.					X		
4. Provide effective instruction in social studies.							
5. Offer opportunities in creative subject areas such as art, musci & drama.					X		
6. Help students develop physically through activities such as physical education, intramural sports & competitive school teams.					X		
7. Prepare students for going to college.					X		
8. Prepare students for getting a good job after high school.	X	X	X	X	X	X	X
9. Give each child a good feeling about her or himself as a worthwhile person.	X	X			X		
10. Provide each child with a feeling that she or he is capable of learning.	X	X	X		X	X	X
11. Give each child a good feeling about her or his own cultural background.							
12. Help students respect & understand people of all races & cultures.					X		X
13. Develop each child's ability to cooperate with other people.	X	X	X	X	X	X	X
14. Develop good study skills.	X	X	X	X	X	X	X
15. Develop each child's desire to continue learning throughout her or his lifetime.	X	X	X	X	X	X	X
16. Provide each child with a sense of responsibility for her or his own actions.	X	X	X	X	X	X	X
17. Teach students to be concerned about the things that all people in our society need.	X	X	X	X	X	X	X
18. Develop good personal health & hygiene habits.					X		X
19. Teach children to obey rules & regulations.	X	X	X		X	X	X
20. Support the ideals of a child's home & family.							
21. Offer a safe, secure school environment.	X	X	X		X	X	X
22. Offer enjoyable experiences while in school.		X			X	X	
Services to Parents							
1. Give opportunities for parent participation in the classroom.							
2. Provide useful information about your child's progress.							
3. Involve parents in decisions about selecting school personnel.							
4. Involve parents in decisions about selecting curriculum & instruction.							
5. Enable parents to choose their child's teachers.							
6. Let parents know about opportunities for enrollment in special programs within the school system.							

All=*All Teachers*
ESP=*ESP Teachers*
Non-ESP=*Non-ESP Teachers*

K-3=*Kindergarten to Third Grade Teachers*
4-6=*Fourth to Sixth Grade Teachers*
7-9=*Seventh to Ninth Grade Teachers*
10-12=*Tenth to Twelfth Grade Teachers*

Table 33. Summary of Services Perceived as Okay or Needing Less Attention by Various Teacher Groupings

Items	All	ESP	NON-ESP	K-3 GRADES	4-6 GRADES	7-9 GRADES	10-12 GRADES
	TEACHER GROUPINGS						
Services to Students							
1. Give effective instruction in language arts skills such as reading, writing, speaking & English.							
2. Provide effective instruction in mathematics.							
3. Give effective instruction in science.							
4. Provide effective instruction in social studies.							
5. Offer opportunities in creative subject areas such as art, music & drama.							●
6. Help students develop physically through activities such as physical education, intramural sports & competitive school teams.						●	●
7. Prepare students for going to college.							
8. Prepare students for getting a good job after high school.							
9. Give each child a good feeling about her or himself as a worthwhile person.							
10. Provide each child with a feeling that she or he is capable of learning.							
11. Give each child a good feeling about her or his own cultural background.						●	
12. Help students respect & understand people of all races & cultures.							
13. Develop each child's ability to cooperate with other people.							
14. Develop good study skills.							
15. Develop each child's desire to continue learning throughout her or his lifetime.							
16. Provide each child with a sense of responsibility for her or his own actions.							
17. Teach students to be concerned about the things that all people in our society need.							
18. Develop good personal health & hygiene habits.							
19. Teach children to obey rules & regulations.							
20. Support the ideals of a child's home & family.				●			
21. Offer a safe, secure school environment.							
22. Offer enjoyable experiences while in school.							
Services to Parents							
1. Give opportunities for parent participation in the classroom.	●	●	●	●		●	●
2. Provide useful information about your child's progress.	●	●	●	●		●	●
3. Involve parents in decisions about selecting school personnel.	●	●	●	●	●	●	●
4. Involve parents in decisions about selecting curriculum & instruction.	●	●	●	●	●	●	●
5. Enable parents to chose their child's teachers.	●	●	●	●		●	●
6. Let parents know about opportunities for enrollment in special programs within the school system.						●	

All=*All Teachers*
ESP=*ESP Teachers*
Non-ESP=*Non-ESP Teachers*

K-3=*Kindergarten to Third Grade Teachers*
4-6=*Fourth to Sixth Grade Teachers*
7-9=*Seventh to Ninth Grade Teachers*
10-12=*Tenth to Twelfth Grade Teachers*

orities for improvement represent three broad child service categories: academics, future outcomes, and personal/social development. The number one priority was personal/social development, particularly the development of a sense of responsibility for one's own actions. As with parents, most services related to future outcomes rated high.

4) Although of less concern, among the direct academic services, the highest priority areas for improvement were in science, reading/language arts, and creative subjects, rather than social studies and math.

5) In keeping with popular theories of child development, teachers expressed concern for opportunities to learn creative skills and to develop physically in the earlier grades. Fourth through Sixth grade teachers tended to be more concerned with academic content and the acquisition of a firm data base by the student, as reflected by interest in improving instruction in particular subjects. Junior high level teachers were concerned with the development of communication and social awareness in the student, and the high school level teachers were concerned with the child's self-acceptance of her or his cultural

background.

6) Teachers' expectations did not vary significantly between ESP and Non-ESP programs.

7) Some differences did exist among grade groups in terms of level of concern, which peaked during the Fourth through Sixth grades, and in the various priorities for improvement in specific services. In general, Kindergarten through Third grade teachers were most satisfied with the level of services currently provided in all areas, and teachers of Fourth through Sixth grades expressed the greatest level of concern in the most areas.

Student Expectancies - Results and Discussion -- The Student Opinion Poll - Part I addressed the expectancies of students for B.U.S.D. services. The poll was administered to 831 students in Fourth through Twelth grades. The student survey form on expectancies was essentially the same as that used with parents and teachers except that students were not asked about services to parents. The demographic distribution of respondents is presented in Table 34.

- All Student Respondents -- The distribution of student responses to each item of the Student Opinion Poll - Part I disclosed that they viewed seven of the twenty-two services to students as needing more attention (Table 35). The seven services which over 60% of the students designated as needing attention included: 1) Offer enjoyable experiences while in school (71.9%); 2) Provide each child with a feeling that she or he is capable of learning (70.7%); 3) Offer a safe, secure school environment (60.3%); 4) Prepare students for getting good jobs after high school (69.1%); 5) Develop each child's desire to continue learning throughout her or his lifetime (66.1%); 6) Develop each child's ability to cooperate with other people (64.7%); 7) Prepare students for going to college (64.0%).

Table 34. Demographic Distribution of Respondents to the Student Opinion Poll, Part I

Grade or Program	Percent Respondents
Fourth - Sixth	
Asian	8.7
Black	38.9
Caucasian	48.8
Other	3.6
Seventh - Ninth	
Asian	9.6
Black	35.8
Caucasian	50.0
Other	4.6
Tenth - Twelfth	
Asian	9.7
Black	44.2
Caucasian	39.3
Other	6.8
ESP	
Asian	13.8
Black	38.3
Caucasian	43.9
Other	4.1
Non-ESP	
Asian	8.0
Black	39.3
Caucasian	47.7
Other	5.0

N = 809

Table 35. Distribution of All Student Opinion Poll-Part I Responses in Percentages

Items	NEEDS MUCH MORE ATTENTION Percent	NEEDS MORE ATTENTION Percent	OKAY AS IS Percent	NEEDS LESS ATTENTION Percent
1. Give effective instruction in language arts skills such as reading, writing, speaking, & English.	12.4	27.3	57.8	2.5
2. Provide effective instruction in mathematics.	14.1	27.1	55.8	3.0
3. Provide effective instruction in science.	22.2	25.9	46.4	5.4
4. Provide effective instruction in social studies.	11.9	21.5	59.0	7.6
5. Offer opportunities in creative subject areas. such as art, music & drama.	21.0	30.2	46.0	2.8
6. Help students develop physically through activities such as physical education, intramural sports, & competitive school teams.	19.5	31.9	43.8	4.9
7. Prepare students for going to college.	25.5	38.5	32.2	3.7
8. Prepare students for getting a good job after high school.	33.0	36.1	26.8	4.1
9. Give each child a good feeling about her or himself as a worthwhile person.	23.9	32.3	40.6	3.3
10. Provide each child with a feeling that she or he is capable of learning.	27.6	43.1	36.2	2.1
11. Give each child a good feeling about her or his own cultural background.	21.3	27.9	44.6	6.2
12. Help students respect & understand people of all races & cultures.	26.7	30.4	39.0	3.9
13. Develop each child's ability to cooperate with other people.	25.1	39.6	31.1	4.2
14. Develop good study skills.	21.2	36.3	39.0	3.6
15. Develop each child's desire to continue learning throughout her or his lifetime.	31.1	35.0	28.3	5.6
16. Provide each child with a sense of responsibility for her or his own actions.	21.2	34.4	39.6	4.8
17. Teach students to be concerned about the things that all people in our society need.	22.4	36.2	36.9	4.5
18. Develop good personal health & hygiene habits.	27.0	29.2	37.3	6.5
19. Teach children to obey rules & regulations.	28.4	28.7	33.2	9.7
20. Support the ideals of a child's home and family.	21.1	23.4	44.7	10.8
21. Offer a safe, secure school environment.	41.3	28.0	27.3	3.4
22. Offer enjoyable experiences while in school.	38.0	33.9	23.7	4.4

Over 60% of the B.U.S.D. students sampled by the Student Opinion Poll - Part I indicated two services which were either okay or needed less attention: 1) The effective provision of language arts skills (60.3%); 2) Effective instruction in social studies (66.6%).

The responses of the student sample indicated general satisfaction with the instructional services, particularly in the areas of language arts skills and social studies. In contrast, three of the future-oriented items were regarded by over 60% as being in need of attention (i.e., preparing for college or jobs and developing a desire for lifelong learning). Two personal interest topics drew reactions in favor of increased attention (feeling capable of learning and developing the ability to cooperate), while social climate topics were twice indicated as also needing attention (secure school environment and an enjoyable school experience).

Table 36 displays the rank order of the students' *Needs Much More Attention* responses. Concern for security at school was ranked first, with the other top ranked services including, in order, the enjoyable school experience, the future-oriented services of preparing for a job after high school and developing the desire for lifelong learning, and obedience to rules and regulations.

Table 36. Rank Order of Services Perceived as Needing Much More Attention by All Student Survey-Part I Respondents

Items	Rank	*NEEDS MUCH MORE ATTENTION* Percent
Offer a safe, secure school environment.	1	41.3
Offer enjoyable experiences while in school.	2	38.0
Prepare students for getting a job after high school.	3	33.0
Develop each child's desire to continue learning throughout her or his lifetime.	4	31.1
Teach children to obey rules and regulations.	5	28.4
Provide each child with a feeling that she or he is capable of learning.	6	27.6
Develop good personal health and hygiene habits.	7	27.0
Help students respect and understand people of all races and cultures.	8	26.7
Prepare students for going to college.	9	25.5
Develop child's ability to cooperate with other people.	10	25.1
Give each child a good feeling about her or himself as a worthwhile person.	11	23.9
Teach students to be concerned about all the things that people in our society need.	12	22.4
Give effective instruction in science.	13	22.2
Give each child a good feeling about her or his own cultural background.	14	21.3
Develop good study skills.	15	21.2
Provide each child with a sense of responsibility for her or his own actions.	15	21.2
Support the ideals of a child's home and family.	17	21.1
Offer opportunities in creative subject areas such as art, music, and drama.	18	21.0
Help students develop physically through activities such as physical education, intramural sports, and competitive school teams.	19	19.5
Provide effective instruction in mathematics.	20	14.1
Give effective instruction in language arts skills such as reading, writing, speaking, English.	21	12.4
Give effective instruction in social studies.	22	11.9

The rank order of student expectancy items indicated that students wanted more improvement in personal, social, and school issues, and in future issues, than they did in direct academic services. It is interesting that the students' second ranked service, offering enjoyable experiences while at school, was not considered to be in need of attention by either parents or teachers. Unfortunately, the wording of this item is too general to permit inferences about the nature of the experiences students are advocating. As phrased, the item could lead one to believe that students are focusing on a trivial aspect of their education. However, this impression may not be accurate in view of recent evidence (e.g., Zimbardo, 1975) regarding some very negative aspects of some contemporary school experiences, particularly at the secondary level. Coupled with their expression of need for increased attention to the safe, secure school environment, students' desire for a more enjoyable school experience may represent some very basic needs.

● ● ESP and Non-ESP Student Groups -- Table 37 displays the distribution of expectancy responses given by ESP and Non-ESP students. With a few exceptions, the two groups gave very similar responses. There were no services which over 75% of either group felt

Table 37 · Distribution of ESP and Non-ESP Student Opinion Poll - Part I Responses in Percentages

Items	ESP				Non-ESP			
	Needs Much More Attn. Percent	*Needs More Attn.* Percent	*Okay As Is* Percent	*Needs Less Attn.* Percent	*Needs Much More Attn.* Percent	*Needs More Attn.* Percent	*Okay As Is* Percent	*Needs Less Attn.* Percent
Services to Students								
1. Give good instruction in language skills such as reading, writing, speaking, and English.	10.6	24.2	62.8	2.4	13.1	28.5	56.3	2.2
2. Give good instruction in math.	12.6	25.6	58.9	2.9	14.5	27.7	54.9	2.9
3. Give good instruction in science.	26.7	29.4	40.6	3.3	21.2	24.7	48.3	5.9
4. Give good instruction in social studies.	11.4	20.3	62.9	5.4	12.1	21.8	58.0	8.1
5. Offer activities in creative areas like art, music, and acting.	22.5	27.0	47.5	2.9	20.6	31.4	43.5	2.5
6. Help students develop physically through activities such as physical education, intramural sports and school teams.	15.8	32.5	44.5	7.2	20.7	31.9	43.1	4.2
7. Prepare students for going to college.	21.6	40.7	33.3	4.4	26.8	38.0	31.7	3.4
8. Train students so they can get good jobs after high school.	28.9	36.0	28.9	6.1	34.6	36.1	25.9	3.4
9. Help students have good feelings about themselves.	22.3	32.3	42.7	2.4	24.7	32.1	39.9	3.2
10. Help students have good feelings about being able to learn.	23.4	34.6	39.5	2.4	29.0	33.7	35.4	1.9
11. Help students have good feelings about their own race and culture.	19.7	28.8	47.1	4.3	21.7	27.6	43.8	6.9
12. Help students respect and understand people of all races and cultures.	22.4	30.5	43.8	3.3	28.0	30.2	37.7	4.0
13. Teach students to cooperate with other people.	23.4	40.0	34.1	2.4	25.7	39.6	30.2	4.5
14. Teach students good study skills.	21.5	33.2	42.4	2.9	21.0	36.9	38.4	3.7
15. Help students to continue to like learning all through their lives.	26.5	38.2	27.5	7.8	33.1	33.7	28.7	4.5
16. Teach students to have feelings of responsibility for what they do.	20.2	33.7	47.3	3.8	21.6	34.7	38.8	4.9
17. Teach students to be concerned about the things that all people in our society need.	22.3	38.1	34.2	5.4	22.8	35.4	37.8	4.0
18. Teach students the importance of health and cleanliness.	19.8	25.2	46.0	8.9	29.7	30.6	34.3	5.4
19. Teach students to obey rules and regulations.	26.3	27.8	34.1	11.7	29.2	29.2	32.9	8.8
20. Give students a feeling or respect for their home and family.	19.8	23.3	42.1	14.9	21.5	23.8	45.6	9.1
21. Give students a safe, secure school.	33.7	29.3	34.1	2.9	44.1	27.4	24.9	3.5
22. Offer pleasant activities to help students enjoy going to school.	33.3	31.9	29.5	5.3	39.5	34.6	21.7	4.2
	N ranges from 180 to 210				N ranges from 572 to 599			

were in need of additional attention. Over 60% of both ESP and Non-ESP student indicated the following six services needed improvement: 1) Offer pleasant activities to help students enjoy going to school (65.2%, 74.1%); 2) Train student to get good jobs after high school (64.9%, 70.7%); 3) Help students to continue to like learning all through their lives (64.7%, 66.8%); 4) Teach students to cooperate with other people (63.4%, 65.3%); 5) Give students a safe, secure school (63.0%, 71.5%); 6) Prepare students for going to college (62.3%, 64.8%).

In addition, over 60% of ESP student respondents recommended more attention be given to teaching students about things all people need (60.4%). Over 60% of Non-ESP students also indicated the need for attention to: 1) Helping students feel they are capable of learning (62.7%); 2) Teaching students the importance of health and cleanliness (60.3%).

Both ESP and Non-ESP students expressed satisfaction with the degree of attention given to the instruction of social studies (68.3%, 66.1%).

Over 60% of ESP students were also satisfied with the attention given to instruction of language arts, and mathematics.

Analyses of responses provided by ESP and Non-ESP students yielded a statistically significant difference for only two items: 1) The development of health and hygiene habits (x^2(3df) = 15.54, $p < .001$); 2) The provision of a safe, secure school environment (x^2(3df) = 15.54, p .027). As depicted in Figure 10, Non-ESP students were significantly more concerned about these services than were ESP students.

● ● Students of Various Grade Groupings -- The distribution of student expectancies for the varying grade groupings is shown in Table 38. Using the criterion of over 60% of respondents, each of the three grade groupings indicate that they feel numerous services should be improved. There are four services which grades Fourth to Sixth, Seventh to Ninth, and Tenth to Twelfth all indicated as being in need of attention: 1) Offer pleasant activities to help students enjoy school (71%, 74%, 71%); 2) Train students so they can get a good job after high school (65%, 71%, 72%); 3) Help students continue to like learning throughout their lives (63%, 72%, 62%); 4) Prepare students for going to college (61%, 66%, 67%).

All three grade groupings indicated satisfaction for social studies instruction (63%, 68%, and 70%). It appears that all levels of the students responding to this survey perceive future-oriented services as needing increased attention by B.U.S.D.

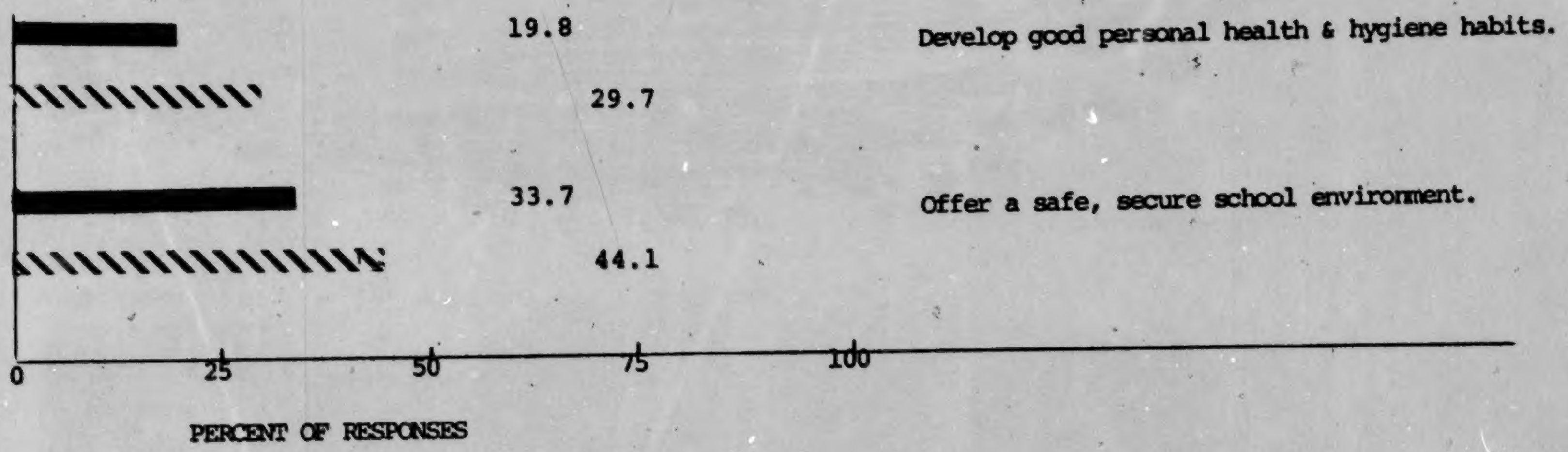

Figure 10 . Distribution of Significantly Different Student Opinion Poll-Part I Responses from ESP and Non-ESP Students

Table 38 - Distribution of Student Opinion Poll - Part I Responses from Students of Various Grade Groupings in Percentages

Items	Grades Four - Six				Grades Seven - Nine				Grades Ten - Twelve			
	Needs Much More Attn.	Needs More Attn.	Okay As Is	Needs Less Attn.	Needs Much More Attn.	Needs More Attn.	Okay As Is	Needs Less Attn.	Needs Much More Attn.	Needs More Attn.	Okay As Is	Needs Less Attn.
	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent
Services to Students												
1. Give good instruction in language skills such as reading, writing, speaking, and English.	.11	.22	.62	.04	.12	.30	.56	.02	.15	.31	.53	.01
2. Give good instruction in math.	.11	.26	.59	.05	.17	.30	.50	.03	.15	.26	.58	.00
3. Give good instruction in science.	.34	.28	.30	.07	.17	.21	.57	.05	.11	.28	.58	.03
4. Give good instruction in social studies.	.14	.23	.54	.09	.11	.21	.60	.08	.11	.20	.66	.04
5. Offer activities in creative areas like art, music, and acting.	.27	.33	.35	.04	.18	.29	.51	.01	.14	.27	.56	.02
6. Help students develop physically through activities such as physical education, intramural sports and school teams.	.28	.34	.33	.05	.16	.34	.47	.03	.11	.25	.57	.08
7. Prepare students for going to college.	.25	.36	.34	.06	.27	.39	.31	.03	.24	.43	.32	.01
8. Train students so they can get good jobs after high school.	.33	.32	.27	.08	.31	.40	.27	.02	.35	.37	.26	.01
9. Help students have good feelings about themselves.	[illegible]	.27	.43	.04	.23	.33	.40	.03	.20	.40	.37	.03
10. Help students have good feelings about being able to learn.	.28	.30	.39	.04	.29	.32	.37	.01	.25	.43	.31	.00
11. Help students have good feelings about their own race and culture.	.23	.25	.46	.06	.21	.29	.42	.08	.18	.31	.46	.04
12. Help students respect and understand people of all races and cultures.	.27	.28	.41	.04	.25	.33	.38	.05	.29	.31	.37	.03
13. Teach students to cooperate with other people.	.32	.36	.26	.06	.24	.42	.31	.03	.16	.43	.38	.03
14. Teach students good study skills.	.19	.32	.45	.04	.25	.35	.35	.04	.19	.43	.35	.02
15. Help students to continue to like learning all through their lives.	.32	.31	.29	.08	.36	.36	.23	.04	.23	.39	.35	.03
16. Teach students to have feelings of responsibility for what they do.	.24	.33	.36	.07	.20	.34	.42	.04	.19	.37	.42	.02
17. Teach students to be concerned about the things that all people in our society need.	.23	.35	.38	.04	.24	.33	.38	.06	.21	.41	.34	.04
18. Teach students the importance of health and cleanliness.	.31	.28	.35	.06	.31	.32	.31	.06	.17	.28	.49	.07
19. Teach students to obey rules and regulations.	.35	.34	.25	.06	.32	.28	.30	.11	.14	.22	.50	.14
20. Give students a feeling of respect for their home and family.	.27	.22	.44	.07	.22	.26	.39	.13	.11	.23	.53	.14
21. Give students a safe, secure school.	.45	.29	.21	.05	.46	.30	.22	.03	.29	.25	.44	.02
22. Offer pleasant activities to help students enjoy going to school.	.41	.30	.22	.07	.39	.35	.24	.03	.32	.39	.26	.03

In addition to the items which all grade groupings agree on, Fourth to Sixth grade students indicated six other items which they felt were in need of attention: 1) A safe, secure school environment (74%); 2) Teaching obedience to rules and regulations (69%); 3) Teaching students to cooperate with other people (68%); 4) Giving good instruction in science (62%); 5) Helping students develop physically (62%); and 6) Offering creative activities (60%).

Moreover, this group of elementary students expressed satisfaction with the level of effort presently given to language arts and mathematics (60%, 64%). The concerns of students at the later elementary level seemed to focus on improved interpersonal relationships between students as well as on effective instruction in specific areas.

Seventh to Ninth students also indicated six other areas where they felt attention was needed: 1) Offering a safe, secure school environment (76%); 2) Teaching students to cooperate (66%); 3) Teaching students the importance of personal health and hygiene (63%); 4) Helping students feel good about their learning capabilities (61%); 5) Teaching students good study skills (60%); 6) Teaching students to obey rules and regulations (60%)

This group of students, unlike elementary students expressed satisfaction with the attention given to science instruction (62%). Junior high students appear to have more concerns about personal well being and development than the younger students, but share the latter's sense of need for improved security and cooperation.

High school students indicated five other services in need of attention: 1) Helping students feel good about their learning abilities (68%); 2) Teaching students good study skills (62%); 3) Teaching students to be concerned about the things all people need (62%); 4) Help students have good feelings about themselves (60%); 5) Help students respect people of all cultures and races (60%). Interestingly, high school students were the only grade grouping which did not indicate that increased attention should be given to the security of their school environment. Their concerns were more often related to personal development, and unlike younger students, to matters indicative of a social consciousness.

Table 39 displays the rank order of services perceived as needing much more attention by students of various grade groupings. An examination of the top five services ranked draws attention to the difference in perceptions of grade groupings relative to science instruction and obedience to rules and regulations. Although statistical tests

Table 39. Rank Order of Services Perceived as Needing Much More Attention by Students of Various Grade Groupings

Items	Grades Four - Six		Grades Seven - Nine		Grades Ten - Twelve	
	Rank	*NEEDS MUCH MORE ATTENTION* Percent	Rank	*NEEDS MUCH MORE ATTENTION* Percent	Rank	*NEEDS MUCH MORE ATTENTION* Percent
Offer a safe, secure school environment.	1	45.2	1	45.9	4	29.0
Offer enjoyable experiences while in school.	1	45.2	2	38.7	2	31.7
Teach children to obey rules and regulations.	3	34.8	4	31.8	18	13.6
Give effective instruction in science.	4	33.9	19	16.9	21	10.9
Prepare students for getting a good job after high school.	5	33.1	5	31.1	1	35.1
Develop each child's desire to continue learning throughout her or his lifetime.	6	32.1	3	36.3	7	23.1
Develop each child's ability to cooperate with other people.	7	31.7	11	24.0	14	15.9
Develop good personal health and hygiene habits.	8	30.8	6	30.6	13	16.5
Help students develop physically through activities such as physical education, intramural sports, and competitive school teams.	9	28.2	20	15.6	22	10.8
Provide each child with a feeling that he or she is capable of learning.	10	28.0	7	29.4	5	24.8
Give opportunities in creative subject areas such as art, music and drama.	11	27.4	17	18.4	17	14.1
Help students respect and understand people of all races and cultures.	12	26.9	10	24.5	3	29.2
Support the ideals of a child's home and family.	13	26.6	14	21.8	19	11.1
Give each child a good feeling about her or himself as a worthwhile person.	13	26.6	13	23.3	9	20.3
Prepare students for getting a good job after high school.	15	24.9	8	27.2	6	23.9
Provide each child with a sense of responsibility for her or his own actions.	16	23.7	16	19.9	12	18.8
Give each child a good feeling about her or his own cultural background.	17	22.8	15	21.1	10	19.3
Teach students to be concerned about the things that all people in our society need.	18	22.7	12	23.5	8	20.7
Develop good study skills.	19	19.2	9	25.0	10	19.3
Provide effective instruction in social studies.	20	13.5	22	10.7	20	11.0
Give effective instruction in language arts skills such as reading, writing, speaking, and English.	21	11.2	21	12.0	16	14.8
Provide effective instruction in mathematics.	22	10.9	18	17.2	15	15.4

were not performed between ranks, it is reasonable to assume that grades Four to Six have a meaningfully different regard for the status of their science instruction than do the two secondary grade groupings. In the same manner, need for improvement in the teaching of obedience to rules and regulations is felt substantially more by the children in the later elementary grades and junior high school than at the senior high level.

The statistically different responses from students of varying grade groupings are presented in Figure 11 . Responses to nine different services achieved statistical significance between the grade groupings: 1) Offer a safe, secure school environment; 2) Support the ideals of a child's home and family; 3) Teach children to obey rules and regulations; 4) Develop good personal health and hygiene habits; 5) Develop each child's desire to continue learning throughout her or his lifetime; 6) Develop each child's ability to cooperate with other people; 7) Help students develop physically; 8) Offer opportunities in creative subject areas; 9) Give effective instruction in science.

One impression which emerges from this graphic display is that later elementary students tend to be somewhat more reactive about these areas than are the two secondary grade groupings. Junior high

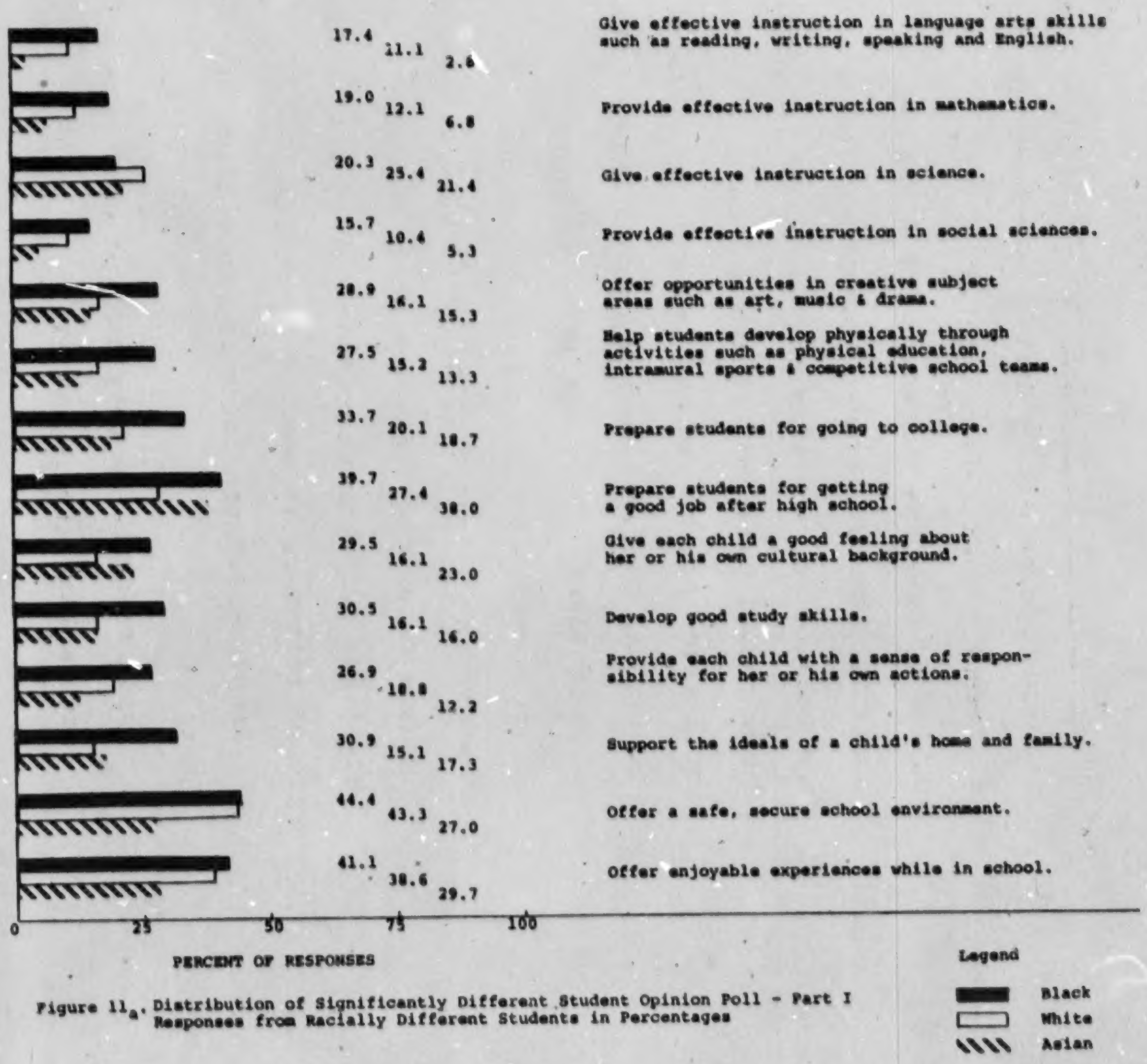

Figure 11_a. Distribution of Significantly Different Student Opinion Poll - Part I Responses from Racially Different Students in Percentages school students match or slightly exceed the younger students in several areas. In no case does the high school grade grouping exceed the younger students. In all cases, the older students appear to be much more satisfied with the level of effort given to these services.

- Racially Different Students -- The distribution of Student Opinion Poll - Part I responses for racially different students is presented in Tables 40 and 41. Table 40 shows the responses for Black and White students, the two largest groupings. Table 41 shows the results for American Indian, Asian, Chicano, and Other racial groups of students. Because of the small sizes of the groups displayed in Table 41, statistical analyses were performed only on the results of Black, White and Asian students.

An examination of Table 40 shows that the roster of services indicated to be in need of attention is highly similar for Black and White students. There were seven services which over 60% of both racial groups felt were in need of attention:

1) Prepare students for going to college (68%, 62.2%).
2) Train students so they can get good jobs after high school (69.5%, 69.3%).

Table 40 - Distribution of Responses to the Student Opinion Poll - Part I from Black and White Students in Percentages

Items	Black				White			
	Needs Much More Attn.	Needs More Attn.	Okay As Is	Needs Less Attn.	Needs Much More Attn.	Needs More Attn.	Okay As Is	Needs Less Attn.
	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent
Services to Students								
1. Give good instruction in language skills such as reading, writing, speaking, and English.	17.4	20.4	58.5	3.7	11.1	33.0	53.8	2.2
2. Give good instruction in math.	19.0	25.4	51.9	3.7	12.1	27.2	58.1	2.7
3. Give good instruction in science.	20.1	20.3	51.4	7.9	25.4	28.3	42.8	3.5
4. Give good instruction in social studies.	15.7	16.3	58.7	9.3	10.4	26.1	55.5	8.0
5. Offer activities in creative areas like art, music, and acting.	28.9	21.7	44.4	4.9	16.1	38.0	44.3	1.6
6. Help students develop physically through activities such as physical education, intramural sports and school teams.	27.5	26.9	41.6	3.9	15.2	35.3	44.0	5.4
7. Prepare students for going to college.	33.7	34.3	29.7	2.3	20.1	42.1	33.4	4.5
8. Train students so they can get good jobs after high school.	39.7	29.8	25.8	4.6	27.4	41.9	27.1	3.6
9. Help students have good feelings about themselves.	28.7	31.7	35.0	4.6	23.3	33.7	40.8	2.2
10. Help students have good feelings about being able to learn.	32.1	29.1	36.1	2.6	27.8	37.5	33.3	1.4
11. Help students have good feelings about their own race and culture.	29.5	23.6	43.3	3.6	16.1	28.4	46.4	9.0
12. Help students respect and understand people of all races and cultures.	30.1	31.1	34.0	4.9	24.5	28.3	43.8	3.5
13. Teach students to cooperate with other people.	26.3	37.2	30.3	6.3	25.8	41.9	29.3	3.0
14. Teach students good study skills.	30.5	28.9	36.1	4.6	16.1	42.5	39.2	2.2
15. Help students to continue to like learning all through their lives.	32.4	33.7	26.8	7.2	33.1	36.4	26.4	4.1
16. Teach students to have feelings of responsibility for what they do.	26.9	30.8	35.7	6.6	18.8	37.9	40.6	2.7
17. Teach students to be concerned about the things that all people in our society need.	25.7	32.3	36.3	5.7	21.9	37.5	36.7	3.8
18. Teach students the importance of health and cleanliness.	32.3	26.4	33.7	7.6	24.2	31.4	38.0	6.3
19. Teach students to obey rules and regulations.	34.0	25.7	29.7	10.6	25.2	30.4	34.2	10.1
20. Give students a feeling of respect for their home and family.	30.9	20.5	36.2	12.4	15.1	26.3	49.4	9.2
21. Give students a safe, secure school.	44.4	20.3	30.4	4.9	43.3	27.9	26.0	2.7
22. Offer pleasant activities to help students enjoy going to school.	41.1	26.0	24.7	8.2	38.6	38.6	20.8	1.9

N ranges from 290 to 309

N ranges from 358 to 372

Table 41 · Distribution of Responses to the Student Opinion Poll - Part I from American Indian, Asian, Chicano, and Other Students in Percentages

Items	American Indian				Asian				Chicano				Other			
	Needs Much More Attn.	Needs More Attn.	Okay As Is	Needs Less Attn.	Needs Much More Attn.	Needs More Attn.	Okay As Is	Needs Less Attn.	Needs Much More Attn.	Needs More Attn.	Okay As Is	Needs Less Attn.	Needs Much More Attn.	Needs More Attn.	Okay As Is	Needs Less Attn.
	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent
Services to Students																
1. Give good instruction in language skills such as reading, writing, speaking, and English.	--	--	--	--	2.8	30.6	66.7	--	7.7	30.8	53.8	7.7	9.5	23.8	66.7	--
2. Give good instruction in math.	100.0	--	--	--	6.8	28.4	64.9	--	8.3	41.7	41.7	8.3	8.3	29.2	62.5	--
3. Give good instruction in science.	--	--	100.0	--	21.4	32.9	45.7	--	27.3	9.1	45.5	18.2	9.5	33.3	42.9	14.3
4. Give good instruction in social studies.	100.0	--	--	--	5.3	20.0	72.0	2.7	23.1	15.4	61.5	--	8.7	21.7	69.6	--
5. Offer activities in creative areas like art, music, and acting.	100.0	--	--	--	15.3	27.8	55.6	1.4	7.7	23.1	61.5	7.7	17.4	34.8	47.8	--
6. Help students develop physically through activities such as physical education, intramural sports and school teams.	100.0	--	--	--	13.3	32.0	53.3	1.3	--	30.8	46.2	23.1	8.3	41.7	45.8	4.2
7. Prepare students for going to college.	100.0	--	--	--	18.7	46.7	28.0	6.7	46.2	15.4	38.5	--	17.4	34.8	47.8	--
8. Train students so they can get good jobs after high school.	--	--	100.0	--	38.0	36.6	21.1	4.2	16.7	50.0	16.7	16.7	39.1	17.4	43.5	--
9. Help students have good feelings about themselves.	--	--	100.0	--	16.4	27.4	53.4	2.7	8.3	33.3	50.0	8.3	13.6	22.7	59.1	4.5
10. Help students have good feelings about being able to learn.	--	--	100.0	--	18.9	32.4	45.9	2.7	18.2	63.6	18.2	--	17.4	26.1	47.8	8.7
11. Help students have good feelings about their own race and culture.	--	100.0	--	--	23.0	32.4	41.9	2.7	15.4	38.5	7.7	9.1	31.8	54.5	4.5	
12. Help students respect and understand people of all races and cultures.	100.0	--	--	--	33.3	28.0	37.3	1.3	15.4	46.2	30.8	7.7	13.6	27.3	54.5	4.5
13. Teach students to cooperate with other people.	--	--	100.0	--	21.3	34.7	42.7	1.3	38.5	38.5	15.4	7.7	13.6	36.4	45.5	4.5
14. Teach students good study skills.	100.0	--	--	--	16.0	36.0	44.0	4.0	--	30.8	46.2	23.1	4.5	40.9	54.5	--
15. Help students to continue to like learning all through their lives.	--	--	100.0	--	20.3	37.8	35.1	6.8	38.5	23.1	30.8	7.7	22.7	18.2	59.1	--
16. Teach students to have feelings of responsibility for what they do.	--	--	--	100.0	12.2	35.1	48.6	4.1	15.4	30.8	46.2	7.7	21.7	30.4	43.5	4.3
17. Teach students to be concerned about the things that all people in our society need.	--	--	100.0	--	17.3	42.7	37.3	2.7	23.1	46.2	23.1	7.7	13.0	39.1	47.8	--
18. Teach students the importance of health and cleanliness.	--	--	100.0	--	21.3	33.3	40.0	5.3	15.4	38.5	46.2	--	36.4	22.7	40.9	--
19. Teach students to obey rules and regulations.	--	--	--	--	24.3	35.1	35.1	5.4	46.2	23.1	30.8	--	18.2	27.3	54.5	--
20. Give students a feeling of respect for their home and family.	--	--	--	100.0	17.3	28.0	46.7	8.0	25.0	16.7	50.0	8.3	13.6	13.6	68.2	4.5
21. Give students a safe, secure school.	100.0	--	--	--	27.0	43.2	29.7	--	30.8	61.5	7.7	--	30.4	52.2	13.0	4.3
22. Offer pleasant activities to help students enjoy going to school.	--	100.0	--	--	29.7	43.2	25.7	1.4	15.4	30.8	46.2	7.7	36.4	22.7	40.9	--
	N = 1				N ranges from 70 to 75				N Ranges from 11 to 13				N Ranges from 21 to 24			

3) Help students have a good feeling about being able to learn (61.2%, 65.3%).

4) Teach students to cooperate with other people (63.5%, 67.7%).

5) Help students to continue to like learning all through their lives (66.1%, 69.5%).

6) Give students a safe, secure school (64.7%, 71.2%).

7) Offer pleasant school experiences (67.1%, 77.2%).

Both Black and White students felt that adequate attention was being given to the instruction of social studies (68.0% and 63.5%).

Additional services which Black students commended for additional attention included:

1) Help students have good feelings about themselves (60.4%).

2) Helping students understand all races and cultures (61.2%).

They were also satisfied with the degree of attention currently given to the instruction of language arts (62.2%). White students expressed satisfaction with the efforts given to mathematics instruction (60.8%).

The services nominated by both Blacks and Whites for improvement would seem to reflect a concern for future-oriented opportunities as well as prerequisites to academic accomplishment. Their concern for security in the schools is also evident. Their favorable responses toward academic areas may indicate a general satisfaction with B.U.S.D.'s purely academic services. Further, the similarity in responses is suggestive that the experiences provided by B.U.S.D. to both of these groups of students is resulting in a fairly common impression on their expectancies.

An examination of the responses of the four other, smaller racial groupings of students shows a fairly similar pattern. While they generally express satisfaction with the level of effort given to the academic areas, they are more concerned with the adequacy of attention to certain future-oriented services (i.e., preparing students for a job or college) and school security. It is interesting to note that these minority students placed more emphasis than Black or White students on the need to understand all cultures and races, and the need to teach students to be concerned with the things all people need. It also appears that Chicano students are experiencing concern over more services than any other racial group.

Table 42 shows the rank order of services indicated by Black and White students to be in need of attention. Both groups ranked a secure environment

Table 42 . Rank Order of Services Perceived As Needing Much More Attention by Black and White Students

Items	Black		White	
	Rank	NEEDS MUCH MORE ATTENTION Percent	Rank	NEEDS MUCH MORE ATTENTION Percent
Offer a safe, secure school environment.	1	44.4	1	43.3
Offer enjoyable experiences while in school.	2	41.1	2	38.6
Prepare students for getting a good job after high school.	3	39.7	5	27.4
Teach children to obey rules & regulations.	4	34.0	8	25.2
Prepare students for going to college.	5	33.7	13	20.1
Develop each child's desire to continue learning throughout her or his lifetime.	6	32.4	3	33.1
Develop good personal health & hygiene habits.	7	32.3	10	24.2
Provide each child with a feeling that she or he is capable of learning.	8	32.1	4	27.8
Support the ideals of a child's home & family.	9	30.9	19	15.1
Develop good study skills.	10	30.5	15	16.1
Help students respect & understand people of all races & cultures.	11	30.1	9	24.5
Give each child a good feeling about her or his own cultural background.	12	29.5	15	16.1
Offer opportunities in creative subject areas such as art, music, and drama.	13	28.9	15	16.1
Give each child a good feeling about her or himself as a worthwhile person.	14	28.7	11	23.3
Help students develop physically through such activities as physical education, intramural sports, & competitive school teams.	15	27.5	18	15.2
Provide each child with a sense of responsibility for her or his own actions.	16	26.9	14	18.8
Develop each child's ability to cooperate with others.	17	26.3	6	25.8
Teach children to be concerned with the things that all people in our society need.	18	25.7	12	21.9
Give effective instruction in science.	19	20.3	7	25.4
Provide effective instruction in mathematics.	20	19.0	20	12.1
Give effective instruction in language arts skills such as reading, writing, speaking & English.	21	17.4	21	11.1
Provide effective instruction in social studies.	22	15.7	22	10.4

first and enjoyable school experiences second. The other services ranked in the top five focused on services with future-oriented purposes (preparing for a job, college, or lifelong learning). Blacks also included obedience to rules and regulations, while Whites also referred to feelings of academic adequacy.

Figure 11 displays the distribution of significantly different Student Opinion Poll - Part I responses from racially different students. Blacks express more concern on most items than Whites and are exceeded only once in their expression of concern for greater attention to a particular service (i.e., effective instruction in science).

● ● Female and Male Student Groups -- There were no significant differences in the expectancies reported by female and male students.

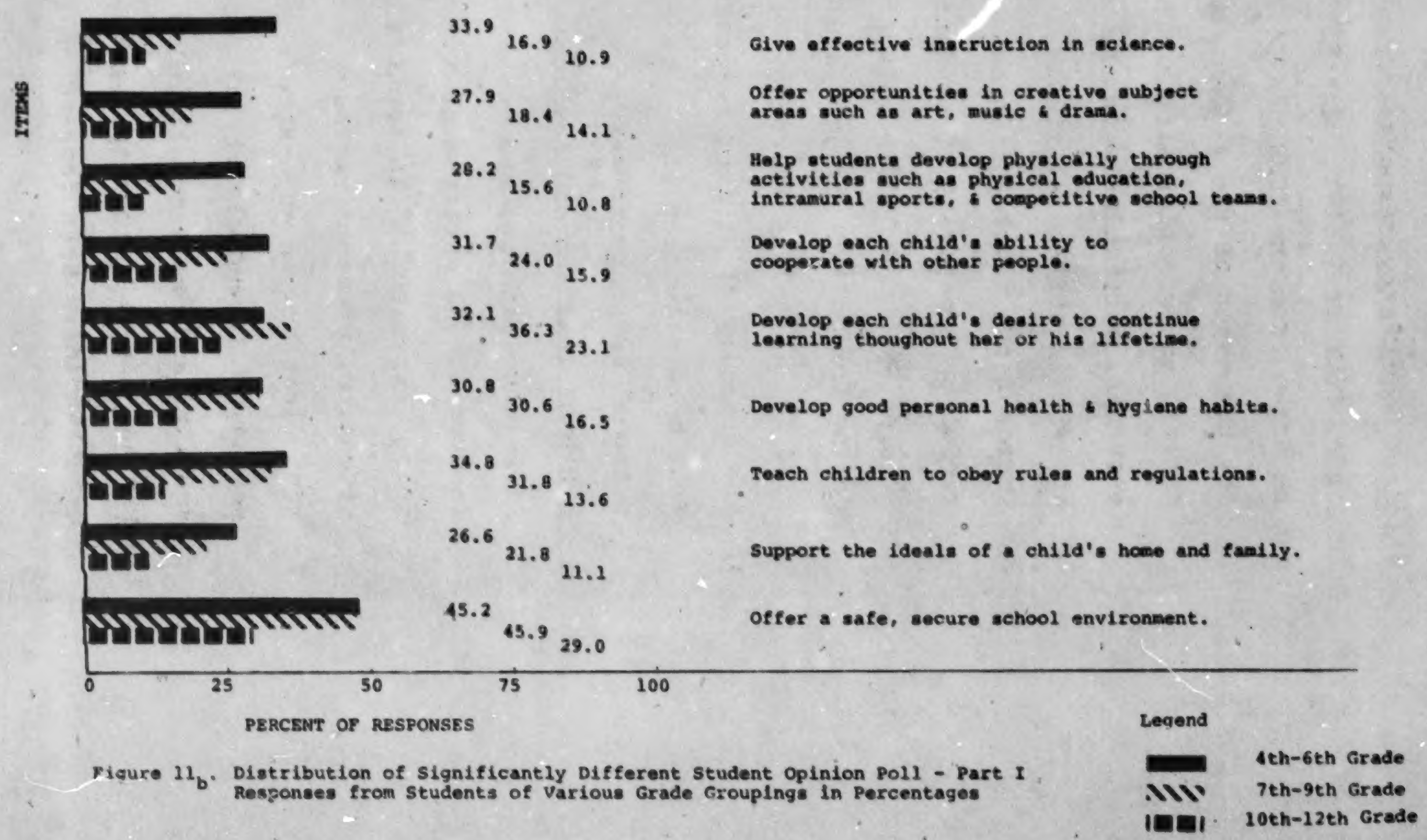

Figure 11_b. Distribution of Significantly Different Student Opinion Poll - Part I Responses from Students of Various Grade Groupings in Percentages

● ● Conclusions -- The Student Opinion Poll - Part I elicited expectancy responses from B.U.S.D. students in grades Four to Twelve. The following conclusions can be drawn from the findings of this survey:

1) The responses of the student sample indicated general satisfaction with the instructional services, particularly in the areas of language art skills and social studies.

2) Three of the future-oriented services were regarded by a majority of student respondents (over 60%) as being in need of attention (i.e., preparing for college or jobs and developing a desire for life-long learning).

3) The majority of student respondents (over 60%) felt more attention should be given to two personal development services (i.e., feeling capable of learning and developing a desire for life-long learning) and two social climate topics (secure school environment and an enjoyable school experience). In terms of needing increased attention, students ranked a secure school environment first and an enjoyable school experience second; followed closely by future oriented services and obedience to rules.

4) ESP and Non-ESP Students expressed very similar expectancies. Both focused on security and har-

mony at school, training for jobs or college, and instilling a desire for lifelong learning. Both groups indicated that social studies instruction received a satisfactory amount of attention in B.U.S.D. ESP students were also satisfied with the attention given to language arts and mathematics. Non-ESP students were significantly more concerned about the development of health and hygiene habits and the provision of a safe, secure school than were ESP students.

5) A majority of students (60% or more) in all three grade groupings agreed that more attention should be given to offering pleasant activities at school, preparing students for jobs and college, and instilling the desire for life-long learning. All three grade groupings were satisfied with the status of social studies.

6) Both later elementary and junior high students unlike senior high students, were concerned about the need for improvement of school security and cooperation between students.

7) Junior high students had more concerns than the Fourth to Sixth graders about personal well being and development. The concerns of high school students focused on personal development, and to a

greater extent than younger students, on issues reflecting a social consciousness.

8) Grades Four to Six indicated substantially greater sentiment toward the improvement of science instruction and teaching obedience to rules and regulations than did older students.

9) Students in grades Four to Six tended to be more reactive to numerous items than did older students. This could indicate several things. It could indicate generally greater dissatisfaction, or a greater tendency to verbalize dissatisfaction. Alternatively, it could indicate a tendency to have greater expectations of the situation; and, therefore to react more quickly to minor situational disparities. On the basis of this very general survey, it is not possible to say which interpretation is accurate.

10) Both Black and White students expressed concern over the future-oriented services as well as services prerequisite to academic development. They were both very concerned about security in the schools, but gave favorable responses with respect to academic services. Asian, Chicano and Other groupings gave similar patterns of response.

11) The Asian, Chicano, and Other students placed more emphasis than did Black and White students on the need to understand all cultures and races

and the need to teach students to be concerned about the things all people need. Chicano students appeared to be experiencing concern over more services than any other racial group.*

12) There were no significant differences in the expectancies reported by female and male students.

13) The results of the survey of student expectancy indicative of improvement needs are summarized in Table 43. Six service areas were designated by most student groupings as being in need of attention. Remembering that these grouping simply distribute the student responses in various ways as determined by student characteristics, it seems that in spite of these characteristics, students agree about the needs in these areas (Table 43). The six areas of agreed upon need for attention are: 1) Prepare students to go to college; 2) Train students so they can get good jobs after high school; 3) Teach students to cooperate with other people; 4) Help students to like learning throughout life; 5) Give students a safe, secure school; and 6) Offer pleasant activities to help student enjoy going to school. The item dealing with student's feelings of

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* Statistical analyses were not performed on American Indian, Chicano, and other student responses due to the small number of such student in the survey.

Table 43 · Summary of Services Perceived as Needing More or Much More Attention by Various Student Groupings

Items	STUDENT GROUPINGS										
	All	ESP	Non ESP	4-6	7-9	10-12	Blk	Wht	As	Ch	Oth
Services to Students											
1. Give good instruction in language skills such as reading, writing, speaking, and English.											
2. Give good instruction in math.											
3. Give good instruction in science.				X							
4. Give good instruction in social studies.											
5. Offer activities in creative areas like art, music, and acting.				X							
6. Help students develop physically through activities such as physical education, intramural sports and school teams.				X							
7. Prepare students for going to college.	X	X	X	X	X	X	X	X	X	X	
8. Train students so they can get good jobs after high school.	X	X	X	X	X	X	X	X	X	X	
9. Help students have good feelings about themselves.						X	X				
10. Help students have good feelings about being able to learn.	X		X		X	X	X	X			
11. Help students have good feelings about their own race and culture.											
12. Help students respect and understand people of all races and cultures.						X	X		X	X	
13. Teach students to cooperate with other people.	X	X	X	X	X		X	X		X	
14. Teach students good study skills.					X	X					
15. Help students to continue to like learning all through their lives.	X	X	X	X	X	X	X	X		X	
16. Teach students to have feelings of responsibility for what they do.											
17. Teach students to be concerned about the things that all people in our society need.		X				X			X	X	
18. Teach students the importance of health and cleanliness.			X		X						
19. Teach students to obey rules and regulations.				X	X					X	
20. Give students a feeling of respect for their home and family.											
21. Give students a safe, secure school.	X	X	X	X	X		X	X	X	X	X
22. Offer pleasant activities to help students enjoy going to school.	X	X	X	X	X	X	X	X	X		

X Reported by 60% or more respondents

All=*All Students*
ESP=*ESP Students*
Non-ESP=*Non-ESP Students*
Blk=*Black Students*
Wht=*White Students*
As=*Asian Students*
Ch=*Chicano Students*
Oth=*Students of Other Races*

academic adequacy also registered substantial agreement.

14) The summary of responses indicative of student satisfaction (Table 44) showed that students of all of the various groupings shared impressions about the adequacy of attention given to instruction in social studies. Also notable was the agreement between several groupings that adequate attention was given to language skills and mathematics.

Table 44 - Summary of Services Perceived as Being Okay or Needing Less Attention by Various Student Groupings

Items	All	ESP	Non ESP	4-6	7-9	10-12	Blk	Wht	As	Ch	Oth
Services to Students											
1. Give good instruction in language skills such as reading, writing, speaking, and English.	●	●		●			●		●	●	●
2. Give good instruction in math.		●		●				●	●		●
3. Give good instruction in science.					●	●				●	
4. Give good instruction in social studies.	●	●	●	●	●	●	●	●	●	●	●
5. Offer activities in creative areas like art, music, and acting.										●	
6. Help students develop physically through activities such as physical education, intramural sports and school teams.						●				●	
7. Prepare students for going to college.											
8. Train students so they can get good jobs after high school.											
9. Help students have good feelings about themselves.											
10. Help students have good feelings about being able to learn.											
11. Help students have good feelings about their own race and culture.											
12. Help students respect and understand people of all races and cultures.											●
13. Teach students to cooperate with other people.											
14. Teach students good study skills.										●	
15. Help students to continue to like learning all through their lives.											
16. Teach students to have feelings of responsibility for wat they do.											
17. Teach students to be concerned about the things that all people in our society need.											
18. Teach students the importance of health and cleanliness.											
19. Teach students to obey rules and regulations.						●					
20. Give students a feeling of respect for their home and family.						●					●
21. Give students a safe, secure school.											
22. Offer pleasant activities to help students enjoy going to school.											

● Reported by 60% or more respondents

All=*All Students*
ESP=*ESP Students*
Non-ESP=*Non-ESP Students*
Blk= *Black Students*
Wht= *White Students*
As= *Asian Students*
Ch= *Chicano Students*
Oth=*Students of Other Races*

- Student Expectancies and Attitudes Toward Instructional Setting - Results and Discussion -- The second objective in measuring student attitude, as identified by B.U.S.D., was to obtain an assessment of student attitudes toward the instructional setting. Instructional setting was operationally defined as the school itself in terms of the physical environment, the social and interpersonal environment, instruction, and curriculum. Essentially, then, the instrument used provided a direct measure of student evaluation of the school on a series of 22 variables, which are subtended under the above catagories. Positive evaluative ratings were identified by either a *strongly agree* or *agree* response, while negative ratings were identified by a *strongly disagree* or *disagree* response.

The sample was essentially the same as for the student expectancies survey, with the exception that a small number of students did not take both parts of the instrument due to absenteeism, tardiness, etc., on testing dates. The total sample was proportionately distributed across grade group, race and ESP - Non-ESP categories, with no bias identified. Table 45 displays the demographic and program representation of the Student Opinion Poll - Part II.

Table 45 • Distribution of Respondents to Student Opinion Poll - Part II

Grade or Program	Percent Respondents
ESP	26
Non-ESP	76
Fourth-Sixth	41
Seventh-Ninth	34
Tenth-Twelfth	25
Black	39
White	47
American Indian	0
Asian	9
Chicano	2
Other	3

The data were analyzed to provide a distribution of positive (i.e., *agree*) and negative (i.e., *disagree*) assessments for each item in the questionnaire. The data were aggregated for all respondents, and comparisons were made on the basis of grade grouping, ESP status, race, and sex. As with the expectancies survey, Chi Square tests were used to identify statistically significant differences at the .05 confidence level.

- All Student Respondents -- Table 46 presents the distribution of responses for all students for all 22 items. The findings show that over 60% of all students sampled agreed with 9 of the 22 items.

Table 46 - Distribution of All Student Survey-Part III Responses in Percentages

Items	AGREE Percent	DISAGREE Percent
1. My school building has a nice appearance.	33.4	66.6
2. My school has comfortable furniture, good lighting, & other things that help me study and learn.	34.8	65.2
3. The number of students at my school is just right.	57.2	42.8
4. My school has enough good equipment for educational activities including things like science equipment, films, & tape recorders.	41.3	58.7
5. Students in my school get along well with one another.	36.8	63.2
6. Students of different races like each other in my school.	51.5	48
7. We don't have to worry about trouble or violence at our school.	20.0	80.0
8. My school treats students of all races equally.	60.2	39.8
9. My school treats girls and boys equally.	63.9	36.1
10. My school has interesting field trips & special social activities.	40.0	60.0
11. I am proud of my school.	44.8	55.2
12. The principal does a good job of running my school.	62.1	37.9
13. My classes are well organized.	55.7	44.3
14. My teachers are good at helping students learn.	73.8	26.2
15. My teachers give me the individual attention I need.	56.6	43.4
16. My teachers try to give me the kind of work that matches my abilities--not too simple & not too hard.	66.5	33.5
17. My teachers encourage me to do my best.	79.3	20.7
18. My teachers give me specific information on how I am doing my work--where I need to improve & where I have advanced.	65.2	34.8
19. I am able to help choose the things I learn about in school.	53.8	46.2
20. The things taught at my school are useful & interesting to me.	68.0	32.0
21. There is enough communication between students & teachers at my school.	55.8	44.2
22. Students are allowed to be involved in some of the decisions at my school.	66.3	33.7

In general, these responses indicated satisfaction with the instruction and personal focus provided in the child's school, as well as equality of treatment to various race or sex groupings. The total sample of student respondents also indicated 5 items with which they disagreed: 1) a nice appearance for the school building (66.6%); 2) comfortable school furniture and lighting (65.2%); 3) good interpersonal relations between students (63.2%); 4) lack of trouble or violence (80%); and 5) interesting field trips and special social activities (60%). These results are consistent with the expectancy survey of students. The expectancy survey showed that students were more satisfied with the efforts given to academic instruction, but concerned about personal and social development as well as a secure school environment.

For individual items, the highest positive rating was given to, "My teachers encourage me to do my best," with 79.3% of the students agreeing. The lowest rating, with only 20% of the students agreeing, was given to, "We don't have to worry about trouble or violence at our school." Other items receiving the positive ratings of over 60% of the students included: 1) the school treats students of all races equally (60.2%); 2) the school treats boys and girls equally (63.9%); 3) the principal does a good job of running the school (62.1%); 4) teachers are good at helping students learn (73.8%); 5) teachers try to match work to student abilities (66.5%); 6) teachers give specific information to the student on the student's progress (65.2%); 7) the school is teaching useful and interesting things (68.0%); 8) students are allowed to be involved in some decisions (66.3%).

- ESP and Non-ESP Student Groups -- The responses of ESP and Non-ESP students are shown in Table 47 and Figure 12. By examining the items for which 60% or more of the students agreed, it can be seen that ESP students agreed with 14 of the items while Non-ESP students agreed with 9 items. Non-ESP students disagreed with 6 items while ESP students disagreed with only 1. In general, then, it would appear that ESP students regard their instructional setting in a more positive way. On some items, it appears that it is the perception of the ESP students that differs rather than the actual instructional setting variable. For example, ESP students rated physical appearance more positively, yet, with the exception of Odyssey and East Campus, both groups attend essentially the same facility.

Table 47 - Distribution of ESP and Non-ESP Student Opinion Poll - Part II Responses in Percentages

Items	ESP				Non-ESP			
	Strongly Agree	*Agree Somewhat*	*Disagree Somewhat*	*Strongly Disagree*	*Strongly Agree*	*Agree Somewhat*	*Disagree Somewhat*	*Strongly Disagree*
	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent
1. My school building has a nice appearance.	10.0	34.3	25.9	29.9	4.3	25.4	27.0	43.3
2. My school has comfortable furniture, good lighting, and other things that help me study and learn.	8.7	33.2	33.2	25.0	6.0	26.4	33.7	33.9
3. The number of students at my school is just right.	17.5	44.7	26.2	11.7	13.7	42.0	27.7	16.7
4. My school has enough good equipment for educational activities including things like science equipment, films, and tape recorders.	14.6	34.0	22.8	28.6	10.4	28.2	31.2	30.2
5. Students in my school get along well with one another.	8.7	36.4	27.2	27.7	6.0	27.9	30.1	36.1
6. Students of different races like each other in my school.	13.2	48.3	23.4	15.1	10.1	37.8	32.2	19.9
7. We don't have to worry about trouble or violence at our school.	3.9	25.0	27.0	44.1	3.6	13.4	29.5	53.6
8. My school treats students of all races equally.	23.7	33.8	22.7	19.8	20.7	40.3	24.3	14.8
9. My school treats girls and boys equally.	20.5	41.0	17.6	21.0	22.6	42.4	19.8	15.2
10. My school has interesting field trips and special social activities.	22.7	36.0	20.7	20.7	12.5	21.1	30.2	36.1
11. I am proud of my school.	16.4	38.3	26.4	18.9	11.9	24.9	29.4	28.7
12. The principal does a good job of running my school.	24.0	43.0	19.0	14.0	21.2	39.8	20.3	18.4
13. My classes are well organized.	21.4	46.6	23.8	8.3	13.1	38.5	33.3	13.1
14. My teachers are good at helping students learn.	44.4	40.0	10.7	4.9	22.7	47.6	22.0	7.7
15. My teachers give me the individual attention I need.	23.3	49.5	16.3	10.9	13.5	37.5	34.3	14.7
16. My teachers try to give me the kind of work that matches my abilities -- not too simple and not too hard.	31.3	43.3	19.4	6.0	21.7	41.9	25.0	11.4
17. My teachers encourage me to do my best.	50.0	36.8	9.8	3.4	33.6	43.3	16.8	6.3
18. My teachers give me specific information on how I am doing in my work -- where I need to improve and where I have advanced.	36.9	34.5	23.8	4.9	27.4	35.7	25.0	12.0
19. I am able to help choose the things I learn about in school.	20.0	43.4	21.5	15.1	12.0	38.3	28.7	21.0
20. The things taught at my school are useful and interesting to me.	30.3	50.5	13.6	5.6	14.6	49.2	23.1	13.0
21. There is enough communication between students and teachers at my school.	22.1	44.1	25.0	8.8	11.0	41.0	31.2	16.8
22. Students are allowed to be involved in some of the decisions at my school.	23.8	44.2	22.3	9.7	19.0	47.2	17.8	16.1

N ranges from 198 to 208 — N ranges from 575 to 602

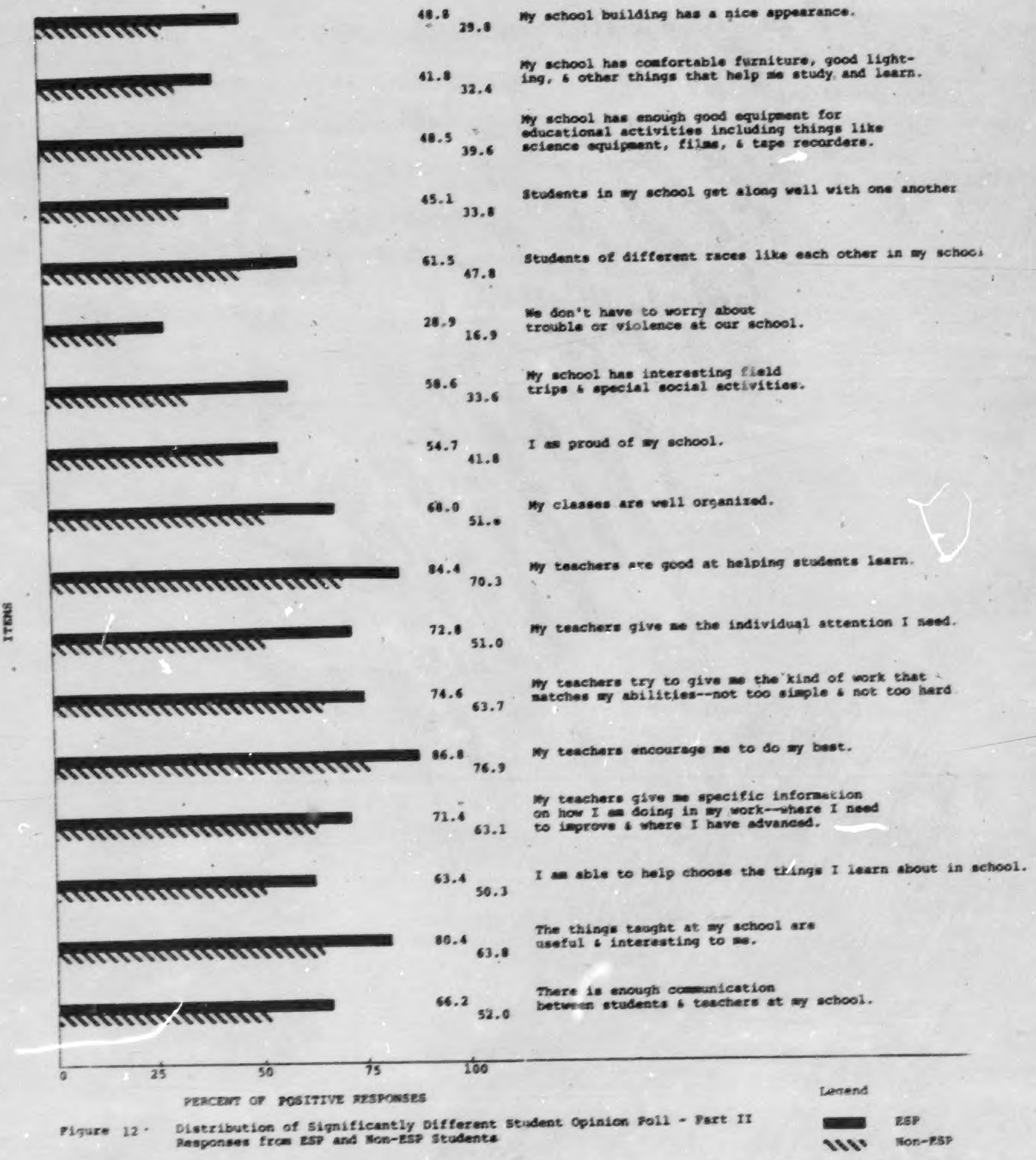

Figure 12 · Distribution of Significantly Different Student Opinion Poll - Part II Responses from ESP and Non-ESP Students

- • Students of Varying Grade Levels -- Substantial differences were found in the responses of different grade groupings, with 18 of the 22 items being significantly different (Figure 13). Generally, Tenth through Twelfth grade students provide a more positive rating than either Fourth through Sixth or Seventh through Ninth grade students. The Tenth through Twelfth graders rated 14 of the 18 items higher. Substantially different ratings occurred between the groups on the following items: 1) my school has a nice appearance; 2) students get along well with each other; 3) we don't worry about trouble or violence; 4) students help choose subject materials.

  Importantly, recognition of the presence of school violence and student cooperation were given by Fourth through Sixth and Seventh through Ninth grade students, further reinforcing the findings of the expectancies survey.

- • Racially Different Student Groups -- The distributions of Student Opinion Poll - Part II responses for various racial groups are shown in Tables 48 and 49. Table 48 shows the results for Black and White students, the two largest racial groups. Due to the number of respondents, only the results of

Table 48 · Distribution of Responses to the Student Opinion Poll - Part II from Black and White Students in Percentages

Items	Black				White			
	Strongly Agree	*Agree Somewhat*	*Disagree Somewhat*	*Strongly Disagree*	*Strongly Agree*	*Agree Somewhat*	*Disagree Somewhat*	*Strongly Disagree*
	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent
1. My school building has a nice appearance.	9.8	25.9	22.0	42.3	3.8	25.5	30.1	40.5
2. My school has comfortable furniture, good lighting, and other things that help me study and learn.	9.1	24.7	28.2	38.0	4.1	26.5	38.9	30.5
3. The number of students at my school is just right.	21.6	41.5	19.9	16.9	9.5	39.5	33.5	17.4
4. My school has enough good equipment for educational activities including things like science equipment, films, and tape recorders.	13.4	28.1	22.7	35.8	9.2	28.8	34.2	27.8
5. Students in my school get along well with one another.	10.6	26.6	26.6	36.2	4.4	29.3	32.1	34.2
6. Students of different races like each other in my school.	15.9	39.9	25.6	18.6	6.0	41.5	33.5	19.0
7. We don't have to worry about trouble or violence at our school.	5.6	17.5	25.4	51.5	2.2	14.6	30.0	53.2
8. My school treats students of all races equally.	18.3	32.9	24.6	24.3	26.3	41.6	23.2	8.9
9. My school treats girls and boys equally.	24.5	35.6	16.4	23.5	20.2	45.2	22.1	12.3
10. My school has interesting field trips and special social activities	22.9	26.6	20.9	29.6	17.6	23.2	32.2	37.1
11. I am proud of my school.	16.6	32.2	23.7	27.5	10.5	29.6	32.0	27.9
12. The principal does a good job of running my school.	24.6	33.2	17.0	25.3	18.8	42.4	24.7	14.1
13. My classes are well organized.	18.7	35.1	28.4	17.7	12.1	42.9	33.2	11.8
14. My teachers are good at helping students learn.	31.2	39.7	18.6	10.5	22.5	50.5	21.4	5.5
15. My teachers give me the individual attention I need.	17.3	37.4	27.3	18.0	13.5	41.6	31.7	13.2
16. My teachers try to give me the kind of work that matches my abilities -- not too simple and not too hard.	31.3	37.0	17.5	14.1	19.0	42.4	30.9	7.7
17. My teachers encourage me to do my best.	47.8	33.3	11.7	7.2	29.2	48.2	18.5	4.1
18. My teachers give me specific information on how I am doing in my work -- where I need to improve and where I have advanced.	33.9	41.4	13.9	10.8	26.0	30.7	32.9	10.4
19. I am able to help choose the things I learn about in school.	17.3	40.1	20.1	22.4	11.3	36.9	32.0	19.8
20. The things taught at my school are useful and interesting to me.	23.4	43.4	17.2	15.9	14.4	49.7	27.1	8.8
21. There is enough communication between students and teachers at my school.	19.0	40.3	23.1	17.6	9.7	41.7	34.0	14.6
22. Students are allowed to be involved in some of the decisions at my school.	26.9	38.7	17.5	16.8	14.9	52.1	17.6	15.4

N ranges from 286 to 308

N ranges from 352 to 371

Table 49 ' Distribution of Responses to the Student Opinion Poll - Part II from American Indian, Asian, Chicano and Other Students in Percentages

Items	American Indian				Asian				Chicano				Other			
	*SA Percent	AS Percent	DS Percent	SD Percent	SA Percent	AS Percent	DS Percent	SD Percent	SA Percent	AS Percent	DS Percent	SD Percent	SA Percent	AS Percent	DS Percent	SD Percent
Services to Students																
1. My school building has a nice appearance.	--	--	100.0	--	1.4	36.5	32.4	29.7	7.7	46.2	23.1	23.1	4.8	28.6	28.6	38.1
2. My school has comfortable furniture, good lighting, and other things that help me study and learn.	--	--	--	100.0	6.8	43.2	35.1	14.9	7.7	30.8	38.5	23.1	13.6	36.4	22.7	27.3
3. The number of students at my school is just right.	--	--	100.0	--	13.5	52.7	25.7	8.1	25.0	58.3	8.3	8.3	18.2	54.5	18.2	9.1
4. My school has enough good equipment for educational activities including things like science equipment, films, and tape recorders.	--	--	--	100.0	17.6	25.7	35.1	21.6	15.4	38.5	15.4	30.8	--	72.7	22.7	4.5
5. Students in my school get along well with one another.	--	100.0	--	--	5.6	36.6	32.4	25.4	7.7	38.5	7.7	46.2	--	50.0	36.4	13.6
6. Students of different races like each other in my school.	--	--	100.0	--	9.7	37.5	36.1	16.7	15.4	30.8	38.5	15.4	18.2	45.5	22.7	13.6
7. We don't have to worry about trouble or violence at our school.	--	--	--	100.0	2.7	13.5	33.0	50.8	16.7	25.0	25.0	33.3	--	19.0	52.4	28.6
8. My school treats students of all races equally.	--	--	100.0	--	16.2	36.5	29.7	17.6	25.0	25.0	16.7	33.3	19.0	61.9	14.3	4.8
9. My school treats girls and boys equally.	--	100.0	--	--	16.0	42.7	24.0	17.3	46.2	30.8	7.7	15.4	13.6	68.2	9.1	9.1
10. My school has interesting field trips and special social activities.	--	--	--	100.0	13.3	28.0	29.3	29.3	41.7	--	25.0	33.3	22.7	27.3	36.4	13.6
11. I am proud of my school.	--	--	100.0	--	12.5	33.3	34.7	9.4	7.7	53.8	15.4	23.1	10.5	42.1	36.8	10.5
12. The principal does a good job of running my school.	--	100.0	--	--	23.0	59.5	9.5	8.1	15.4	38.5	23.1	23.1	30.0	50.0	15.0	5.0
13. My classes are well organized.	100.0	--	--	--	12.0	49.3	33.3	5.3	23.1	15.4	38.5	23.1	9.1	54.5	31.8	4.5
14. My teachers are good at helping students learn.	--	--	100.0	--	38.4	45.2	13.7	2.7	30.8	46.2	15.4	7.7	40.0	40.0	20.0	--
15. My teachers give me the individual attention I need.	--	--	100.0	--	19.2	49.3	24.7	6.8	15.4	46.2	30.8	7.7	20.0	40.0	40.0	--
16. My teachers try to give me the kind of work that matches my abilities--not too simple and not too hard.	--	--	--	100.0	28.4	51.4	14.9	5.4	23.1	23.1	38.5	15.4	14.3	52.4	23.8	9.5
17. My teachers encourage me to do my best.	100.0	--	--	--	42.7	41.3	8.0	8.0	30.8	30.8	23.1	15.4	40.0	35.0	25.0	--
18. My teachers give me specific information on how I am doing in my work--where I need to improve and where I have advanced.	--	100.0	--	--	30.7	37.3	24.0	8.0	30.8	23.1	30.8	15.4	33.3	28.6	33.3	4.8
19. I am able to help choose the things I learn about in school.	--	--	100.0	--	14.9	44.6	27.0	13.5	23.1	38.5	30.8	7.7	9.1	59.1	27.3	4.5
20. The things taught at my school are useful and interesting to me.	--	100.0	--	--	19.4	59.7	11.1	9.7	23.1	53.8	15.4	7.7	14.3	76.2	4.8	4.8
21. There is enough communication between students and teachers at my school.	--	--	100.0	00	13.2	45.9	33.8	8.1	30.8	46.2	23.1	--	19.0	47.6	33.3	--
22. Students are allowed to be involved in some of the decisions at my school.	--	100.0	--	--	13.5	48.6	31.1	6.8	30.8	46.2	15.4	7.7	23.8	52.4	19.0	4.8
	N = 1				N ranges from 71 to 75				N ranges from 12 to 13				N ranges from 19 to 22			

*SA = Strongly Agree; AS = Agree Somewhat; DS = Disagree Somewhat; SD = Strongly Disagree

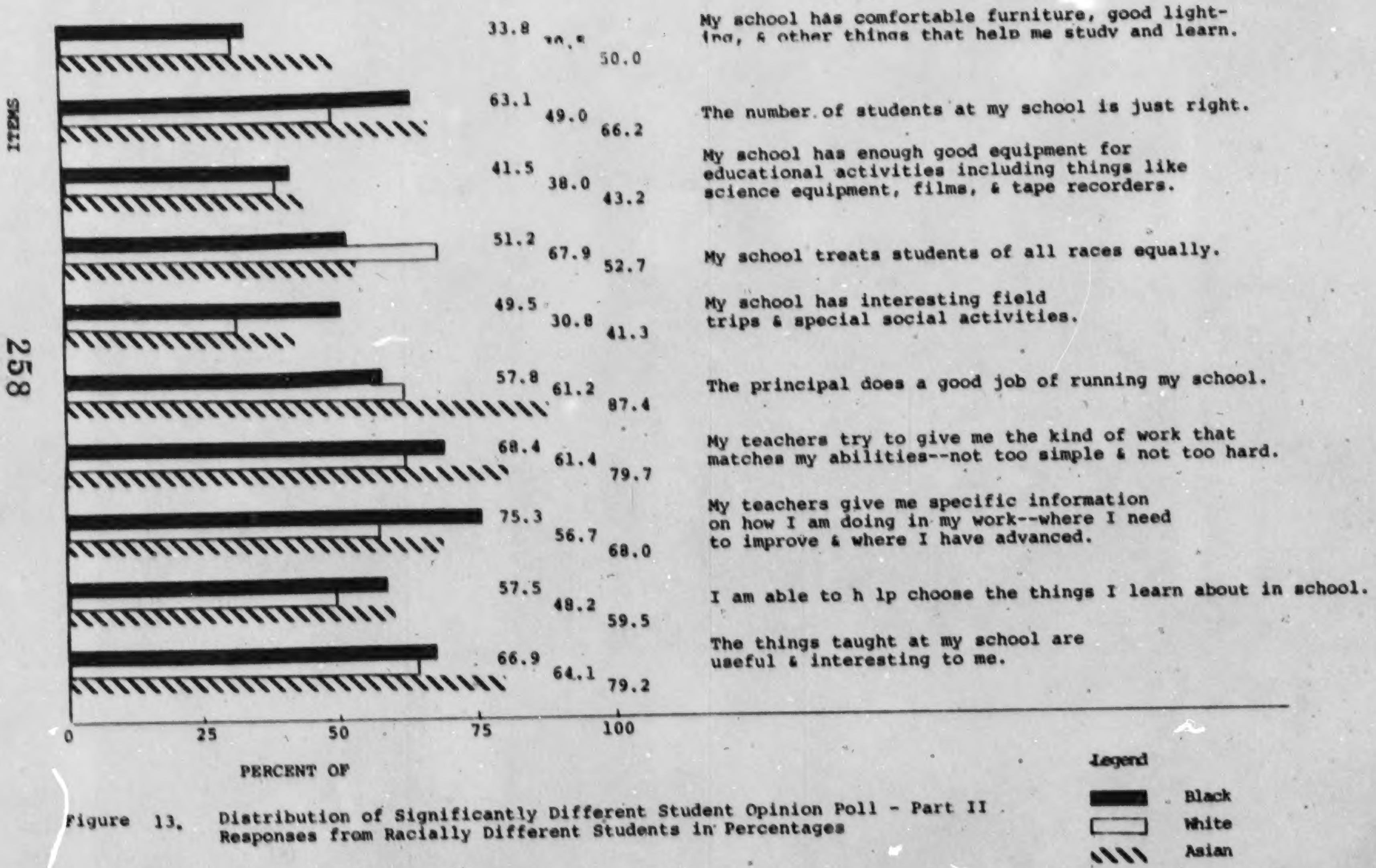

Figure 13. Distribution of Significantly Different Student Opinion Poll - Part II Responses from Racially Different Students in Percentages

the three largest racial groups were analyzed (i.e., Black, White, Asian). However, the results for the four smaller racial groupings are presented in Table 49.

The results for Black and White students show that over 60% of each agreed with 8 of the 22 items and that this agreement was shared on 6 items (i.e., students are allowed to be involved in some decisions; interesting and useful things are taught; teachers encourage students to do their best; teachers try to match work to abilities of students; teachers help students learn; the school treats girls and boys equally). A majority of Black students (60% or more) also agreed that the number of students in the school was "just right," and that teachers gave students specific information about their progress. White students were positive in regard to the equality of treatment given to all races and the job done by the principal.

When the items with which students disagreed are examined, similarities between Black and White students emerge again. White students share in the disagreement expressed by Black students for 4 items. Specifically, both races disagreed that: 1) their school building has a nice appearance (64.3%, 70.6%); 2) that the school has comfortable furniture and lighting (66.2%, 69.4%); 3) that students get along well together (67.8%, 66.3%); and 4) that they don't have to worry about trouble and violence (76.9%, 83.2%). In addition, White students disagreed with the statement that, "My school has enough good equipment for educational activities including things like science equipment, films, and tape recorders" (62%). Thus, it appears that both Black and White students feel that the physical state of their school buildings is inadequate and that the interpersonal environment contains conflict and violence. Their concerns about physical appearance and equipment are interesting in view of the probable budgetary constraints in the coming year relative to improvements in these areas. It must also be noted that a high index of disagreement is not necessarily synonymous with priority concerns. It simply permits the identification of certain discrepant instructional setting factors. In view of the all positive phrasing of the items and the positive response set that this probably induces, the evaluation would hypothesize that *disagree* responses take somewhat more inertia to make than *agree* responses and may thus be rather more valid.

An examination of the pattern of responses given by the four minority groups, as shown in

Table 49, reveals a similar disposition for agreement to the latter half of the items, therefore referring to positive and to individualized instructional approaches. There is strong disagreement from Asian and Other groups regarding lack of trouble or violence (83.8%, 81.0%). Asian, Chicano and Other groups all disagreed that the physical state of their school was satisfactory.

The distribution of significantly different item responses for Black, White, and Asian students is presented in Figure 14. Ten items were found to be significantly different, with an apparent trend for Asian students to rate the variables highest, followed by Black and White students. The degree of difference, however, is not great, with variation usually ranging between 10 and 20%.

• • Female and Male Student Groups -- No significant differences were found between female and male students.

• • Conclusions -- The Student Opinion Poll - Part II addressed students' feelings about their instructional setting. The following conclusions resulted:

1) The analysis of all Fourth to Twelfth grade students in the sample showed that they were satisfied with the instruction and personal

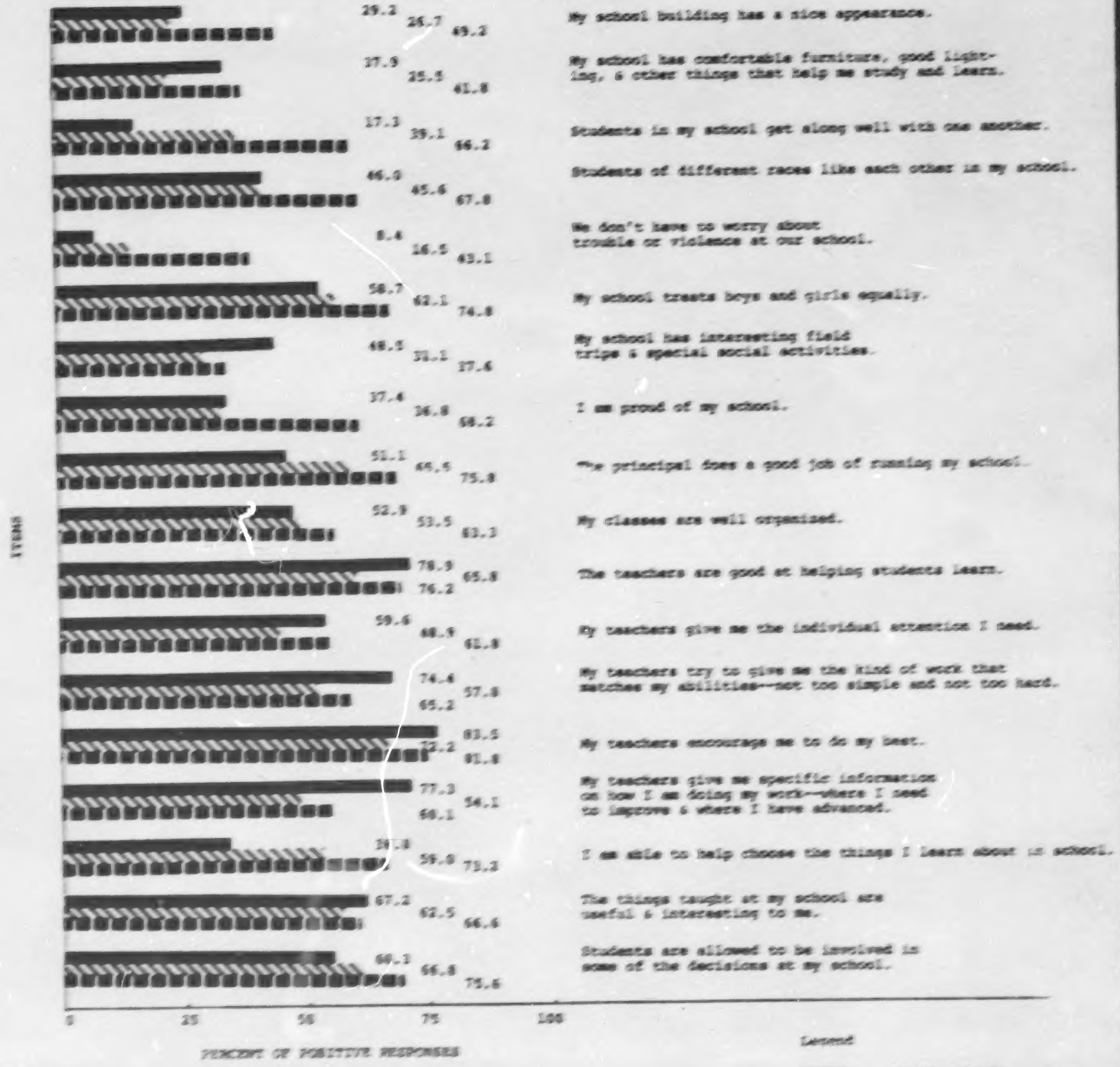

Figure 14. Distribution of Significantly Different Student Opinion Poll-Part II Responses from Varying Grade Groupings

focus provided, and also with the equality of treatment given to various races and both sexes.

2) The analysis of all Fourth to Twelfth grade students in the sample showed that they were concerned with the physical appearance and furnishings in their schools and with the availability of interesting field trips and social activities. There was strong recognition that trouble and violence were a factor in their instructional setting.

3) ESP students regarded their instructional setting in a more positive way than did Non-ESP students. In some cases (e.g., differing assessments of physical appearance of the school building, where ESP and Non-ESP students share the same building), this difference is probably a matter of perception rather than reality.

4) Tenth through Twelfth grade students were more positive in their assessments of instructional setting factors than were either junior high or later elementary students.

5) The features of the instructional setting which aroused the most diverse ratings between grade groupings included the physical appearance of the schools, interpersonal relations between students, trouble or violence, and the decision-

making opportunities for students. As on the expectancy survey, Fourth to Sixth and Seventh to Twelfth grade students registered strong recognition of poor student cooperation and the presence of trouble and violence. High school students were significantly less impressed with the existence of these problems.

6) Black and White students shared numerous perceptions of the school setting. Both had a positive regard for the instructional approaches being used in their schools and also felt that girls and boys were treated equally.

7) Both Black and White students disagreed with statements indicative of pleasant and comfortable physical aspects of their schools (i.e., nice appearance, comfortable furniture, good lighting). Both groups also disagreed with statements suggesting that students existed cooperatively or that violence and trouble in their schools were not a problem.

8) Asian, Chicano, and Other groups were disposed to agree with statements presenting a positive picture of instructional methods and of individualized teaching approaches. Strong disagreement was voiced by Asian and Other groups to statement suggesting lack of violence or

trouble. Asian, Chicano, and Other groups all indicated that the physical state of their schools was not satisfactory.

9) Significant differences between racial groups appeared on 10 of the 22 items. In general, Asian students rated the statements more positively, followed by Black and White students.

10) There were no significant differences in the views expressed by female and male students on instructional setting statements.

11) A summary display of student responses about the instructional setting (Table 50) shows that there is general concensus between the various groupings of students about the positive status of a whole range of questions dealing with instructional approaches. The summary of students' disagreement responses (Table 51) showed a tight concensus among student groups that the quality of physical attributes of their schools were lacking and that trouble, violence, and lack of inter-student cooperation existed.

Table 50 - Summary of Agreement Responses on Student Survey - Part II by Various Student Groups

Items	All	ESP	Non ESP	Blk	Wht	As	Ch	Oth
1. My school building has a nice appearance.								
2. My school has comfortable furniture, good lighting, and other things that help me study and learn.								
3. The number of student at my school is just right.		●		●		●	●	●
4. My school has enough good equipment for educational activities including things like science equipment, films, and tape recorders.								●
5. Students in my school get along well with one another.								
6. Students of different races like each other in my school.		●						●
7. We don't have to worry about trouble or violence at our school.								
8. My school treats students of all races equally.	●		●		●			
9. My school treats girls and boys equally.	●	●	●	●	●		●	●
10. My school has interesting field trips and special social activities.								
11. I am proud of my school.							●	
12. The principal does a good job of running my school.	●	●	●		●	●		●
13. My classes are well organized.		●				●		●
14. My teachers are good at helping students learn.	●	●	●	●	●	●	●	●
15. My teachers give me the individual attention I need.		●				●	●	●
16. My teachers try to give me the kind of work that matches my abilities -- not to simple and not too hard.	●	●	●	●	●	●		●
17. My teachers encourage me to do my best.	●	●	●	●	●	●	●	●
18. My teachers give me specific information on how I am doing in my work -- where I need to improve and where I have advanced.	●	●	●	●		●		●
19. I am able to help choose the things I learn about in school.		●					●	●
20. The things taught at my school are useful and interesting to me.		●	●	●	●	●	●	●
21. There is enough communication between students and teachers at my school.		●					●	●
22. Students are allowed to be in olved in some of the decisions at my school.	●	●	●	●	●	●	●	●

● Reported by 60% or more respondents

All=All Students
ESP=ESP Students
Non-ESP=Non-ESP Students
Blk=Black Students
Wht=White Students
As=Asian Students
Ch=Chicano Students
Oth=Students of Other Races

Table 51 Summary of Disagreement Responses on Student Survey - Part II by Various Student Groups

Items	STUDENT GROUPS							
	All	ESP	Non ESP	Blk	Wht	As	Ch	Oth
1. My school building has a nice appearance.	X		X	X	X	X		X
2. My school has comfortable furniture, good lighting, and other things that help me study and learn.	X		X	X	X		X	
3. The number of students at my school is just right.								
4. My school has enough good equipment for educational activities including things like science equipment, films, and tape recorders.			X		X			
5. Students in my school get along well with one another.	X		X	X	X			
6. Students of different races like each other in my school.								
7. We don't have to worry about trouble or violence at out school.	X	X	X	X	X	X		
8. My school treats students of all races equally.								
9. My school treats girls and boys equally.								
10. My school has interesting field trips and special social activities.	X		X		X			
11. I am proud of my school								
12. The principal does a good job of running my school.								
13. My classes are well organized.						X		
14. My teachers are good at helping students learn.								
15. My teachers give me the individual attention I need.								
16. My teachers try to give me the kind of work that matches my abilities -- not too simple and not too hard.								
17. My teachers encourage me to do my best.								
18. My teachers give me specific information on how I am doing in my work -- where I need to improve and where I have advanced.								
19. I am able to help choose the things I learn about in school.								
20. The things taught at my school are useful and interesting to me.								
21. There is enough communication between students and teachers at my school.								
22. Students are allowed to be involved in some of the decisions at my school.								

X Reported by 60% or more respondents

All=All Students
ESP=ESP Students
Non-ESP=Non-ESP Students
Blk=Black Students
Wht=White Students
As=Asian Students
Ch=Chicano Students
Oth=Students of Other Races

- Student Attitude Toward Self (SCAMIN)-Results and Discussion -- The Self Concept and Motivation Inventory was administered to 300 children in each grade grouping, with Kindergarten excluded. The SCAMIN was administered in a group manner to entire classrooms of children. At least one classroom from each B.U.S.D. school was included in the SCAMIN sample. In large schools such as Berkeley High School, four or five classrooms were used. These classrooms were selected in a random manner with the restriction that the number of classrooms per grade should be equated as much as possible. The purpose of conducting the SCAMIN surveys was to obtain an understanding of the types of feelings of academic worthiness and motivation that B.U.S.D. students hold for themselves. Although the sample of SCAMIN respondents contained an equal number of students at each grade grouping, and a proportionate number of ESP and Non-ESP students, the size of the sample did not permit stratification for race and sex. The results of the SCAMIN were analyzed to reveal the differential Academic Self Concept, Academic Motivation, and Total SCAMIN results for each grade grouping, four race groupings, and the two sex groupings. In some cases, the number of students per category limited by interpretation of results.

  Before presenting the results obtained with the SCAMIN, it is necessary to discuss some of the reservations connected with interpreting these findings. The CONSTRAINTS section of this report (Refer to pages 14 to 23) make reference to several of these problems.

There are three critical areas of concern in interpreting SCAMIN results. First, the theoretical and research status of the construct of academic attitude is still immature. The nature and manifestations of various degrees of academic self concept and motivation are not fully understood. Consequently, the factors which cause or correlate with academic self concept and motivation are also not completely understood. Yet, most educators, psychologists, parents, and students believe that the way students regard themselves as learners and the desire they have for academic accomplishment are closely related to the actual benefits that they derive from going to school.

In response to the observation that academic self concept and motivation are important to achievement several scales such as the SCAMIN were developed in recent years to assess these constructs. However, the recency of these tests, and the fact that large-scale rigorous standardization procedures have not been applied to them, constitutes the second reason why it is necessary to interpret the results they produce with caution. The SCAMIN has provided a stable, longitudinal approach to measuring the academic self concept and motivation of a large sample of Chicano students in the San Antonio ESP evaluation. It is therefore reasonable to attribute some credibility to its results.

The third area of concern with the SCAMIN as it was used in the B.U.S.D. Evaluation Study is based on the experience that observers had in administering the test to secondary students. The apparent failure of the scale to engage these students in a serious way casts doubts on the validity of the responses they provided.

The SCAMIN results presented below are offered as tentative evidence of B.U.S.D. students' academic self concepts and academic motivation. It is suggested that they be regarded as baseline measures which should receive additional verification in the future if opportunity permits. The validity of the results would be substantially improved with a random sampling approach, equal cell sizes, and improved conditions for administration. The results on secondary students are most tentative while the evaluators have most confidence in the validity of findings obtained with elementary students.

- Academic Self Concept -- Separate three-way analyses of variance were performed on the raw scores of each grade grouping. Race was found to be a statistically significant variable in the Four to

Six, Seven to Nine, and Ten to Twelve grade groupings. However, differences between mean Academic Self Concept scores in the first two of these groupings appear to be rather small and difficult to consider important (Table 54). The more substantial range of Self Concept scores for high school students (Table 52) encourages more confidence that an actual difference exists in the self concepts of varying racial groups at that level. The mean Academic Self Concept scores for high school students was 85.60 for White students, 104.65 for Black students, and 104.95 for Asian students (F (2df) = 1.136, $\underline{p} < .001$).

ESP enrollment was a statistically significant variable in the three way analyses of First through Third grade and Tenth through Twelfth grade students. For the primary students, the difference between ESP and Non-ESP students was very slight. However, the range of scores between the two programs at the high school level was more sizeable. ESP high school students obtained a mean Academic Self COncept score of 105.78 and Non-ESP students obtained a score of 91.14 (F = 23.22 (1df); $p < .001$).

The primary and high school grade grouping also contained the same statistically significant two-way interaction of Self Concept scores (Tables 56 and 59). In both grade groupings, the race and ESP variables interacted significantly (F = 3.93

Table 52. Mean SCAMIN Scores for all Respondents

Grade Grouping[1]	Academic Self Concept M	Academic Self Concept SD	Academic Motivation M	Academic Motivation SD	Total SCAMIN M	Total SCAMIN SD	N
First - Third Grades[2] (Early Elementary Form)	43.92	5.37	48.75	4.42	92.67	7.46	228
Fourth - Sixth Grades[3] (Later Elementary Form)	80.77	12.20	92.09	11.52	172.86	20.12	343
Seventh - Ninth Grades[4] (Secondary Form)	102.09	12.97	119.16	14.24	221.25	22.79	209
Tenth - Twelfth Grades (Secondary Form)	95.93	26.22	108.65	29.62	204.58	54.61	252

[1] Only secondary grade groups may be compared because scores from different SCAMIN forms are not comparable.

[2] Total possible score = 120 (60 Self Concept, 60 Motivation)

[3] Total possible score = 240 (120 Self Concept, 120 Motivation)

[4] Total possible score = 320 (160 Self Concept, 160 Motivation)

Table 53. Mean SCAMIN Scores for Grade Grouping

Grade[1]	Academic Self Concept		Academic Motivation		Total SCAMIN		
	M	SD	M	SD	M	SD	N
First	44.11	6.28	47.54	5.44	91.66	8.44	35
Second	44.20	5.34	49.68	3.41	93.88	7.34	60
Third	43.74	5.16	48.65	4.44	92.39	7.22	133
Fourth	81.49	13.66	92.13	12.80	173.63	23.17	128
Fifth	82.45	12.19	96.39	9.97	178.84	17.32	44
Sixth	79.79	10.97	90.96	10.66	170.75	17.98	171
Seventh	103.59	13.78	119.64	16.82	223.22	25.26	94
Eighth	102.67	13.37	114.48	15.17	217.14	23.80	42
Ninth	100.84	12.20	120.30	11.49	221.14	20.53	133
Tenth	106.55	10.24	121.88	10.84	228.43	16.58	93
Eleventh	108.16	12.77	121.87	9.46	230.03	19.07	77
Twelfth	72.41	32.05	81.22	37.04	153.63	68.49	82

[1] First through third grades were given the Early Elementary Form; Fourth through Sixth grades were given the Later Elementary Form; Seventh through Twelfth grades were given the Secondary Form.

Table 54. Mean SCAMIN Scores for Racially Different Students

Race per Grade Grouping	Academic Self Concept M	Academic Self Concept SD	Academic Motivation M	Academic Motivation SD	Total SCAMIN M	Total SCAMIN SD	N
First - Third Grade	43.92	5.37	48.92	4.36	92.67	7.46	219
Asian	43.78	5.04	47.56	4.42	91.33	8.54	9
Black	43.87	6.04	49.13	4.54	93.00	8.12	93
White	44.22	4.92	48.68	4.30	92.00	6.56	106
Other	43.36	3.83	48.82	3.57	92.18	6.34	11
Fourth - Sixth Grade[1,2,3]	80.77	12.20	92.09	11.52	172.86	20.12	343
Asian	83.30	8.40	94.17	6.61	177.47	12.67	30
Black	83.22	12.93	93.47	12.44	176.69	20.89	131
White	78.34	11.78	90.48	11.61	168.83	20.29	160
Other	80.42	11.73	95.42	9.48	177.83	16.75	12
Seventh - Ninth Grade[1,3]	102.09	12.97	119.16	14.26	221.25	22.79	269
Asian	100.12	11.66	120.08	14.81	220.20	23.01	25
Black	108.59	13.55	120.55	10.83	229.14	20.24	86
White	98.36	10.88	119.08	16.36	217.45	23.29	32
Other	103.44	18.08	118.33	10.81	221.78	26.75	9
Tenth - Twelfth[1,2]	95.93	26.22	108.65	29.62	204.58	54.61	252
Asian	104.95	17.37	122.00	18.76	226.95	33.91	20
Black	104.65	21.70	113.75	23.47	218.41	43.54	101
White	85.60	28.09	101.26	34.56	186.86	61.90	107
Other	95.87	28.60	107.93	31.55	203.80	59.35	15

[1] Significant differences in Academic Self Concept

[2] Significant differences in Academic Motivation

[3] Significant differences in Total SCAMIN Scores

Table 55. Mean SCAMIN Scores for ESP and Non-ESP Students

ESP - Non-ESP per Grade Grouping	Academic Self Concept		Academic Motivation		Total SCAMIN		
	M	SD	M	SD	M	SD	N
First - Third Grade[1,3]							
ESP	42.14	5.89	48.32	4.02	90.46	8.18	63
Non- ESP	44.58	5.00	48.89	4.56	93.47	6.93	163
Fourth - Sixth Grade							
ESP	82.40	13.23	93.06	13.51	175.46	24.06	89
Non- ESP	80.32	11.73	91.82	10.75	172.14	18.58	250
Seventh - Ninth Grade							
ESP	97.95	12.72	116.41	12.07	214.36	18.82	39
Non-ESP	102.81	12.96	119.69	14.50	222.50	23.22	227
Tenth - Twelfth Grade[1,2,3]							
ESP	105.78	10.60	121.37	11.64	227.17	17.20	82
Non-ESP	91.14	30.04	102.44	33.57	193.59	62.78	169

[1] Significant differences in Academic Self Concept Scores

[2] Significant differences in Academic Motivation and Total SCAMIN scores

[3] Significant differences in Total Scamin Scores

TABLE 56. Mean SCAMIN Scores for ESP, Race, and Sex for First through Third Grade Students

Students	Academic Self Concept[1]		Academic Motivation		Total SCAMIN		
	M	SD	M	SD	M	SD	N
ESP	42.16	5.96	48.31	4.08	90.48	8.31	61
Asian	41.50	6.76	46.50	4.66	88.00	10.95	4
females	43.50	7.78	49.50	4.95	93.00	12.73	2
males	39.50	7.78	[illegible]	2.12	83.00	9.90	2
Black	40.52	6.33	48.30	4.68	88.82	9.49	27
females	41.18	4.07	49.64	4.23	90.82	6.57	11
males	40.06	7.61	47.88	4.88	87.44	11.06	16
White	44.04	5.20	48.74	3.28	92.78	5.94	27
females	42.40	3.44	49.87	2.48	92.27	4.25	15
males	46.08	6.37	47.33	3.70	93.42	7.73	12
Other	41.00	6.00	47.00	5.57	88.00	11.53	3
females	44.00	4.24	49.50	4.95	93.50	9.19	2
males	35.00	0.00	42.00	0.00	77.00	0.00	1
NON-ESP	44.68	4.93	48.99	4.44	93.66	6.59	157
Asian	45.60	2.70	48.40	4.56	94.00	6.00	5
females	46.25	2.63	47.50	4.73	93.75	6.90	4
males	43.00	0.00	52.00	0.00	95.00	0.00	1
Black	45.24	5.38	49.47	4.47	94.71	6.86	66
females	44.88	5.90	49.09	5.28	93.97	7.56	34
males	45.63	4.83	49.88	3.43	95.50	6.05	32
White	44.18	4.81	48.56	4.57	92.74	6.62	78
females	44.95	5.27	49.76	3.31	94.70	6.44	37
males	43.49	4.31	47.49	5.27	90.98	6.34	41
Other	44.25	2.71	49.50	2.73	93.75	3.01	8
females	46.00	1.73	50.67	3.06	96.67	1.53	3
males	43.20	2.78	48.80	2.59	92.00	2.12	5

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[1] Significantly different ESP x Race Interaction

TABLE 57. Mean SCAMIN Scores for ESP, Race, and Sex for Fourth through Sixth Grade Students

Students	Academic Self Concept		Academic Motivation		Total SCAMIN		
	M	SD	M	SD	M	SD	N
ESP	82.62	13.18	93.29	13.62	175.91	24.04	86
Asian	82.88	9.46	94.19	7.44	177.06	14.49	16
females	88.17	11.27	99.50	7.45	187.67	15.60	6
males	79.70	6.98	91.00	5.60	170.70	9.74	10
Black	86.00	10.90	96.63	8.67	182.63	15.23	38
females	85.04	12.01	97.30	9.70	182.35	16.77	23
males	87.47	9.13	95.60	7.00	183.07	13.07	15
White	77.60	16.24	89.03	19.46	166.63	33.76	30
females	78.50	17.28	90.43	21.01	168.93	36.00	14
males	76.81	15.81	87.81	18.62	164.63	32.72	16
Other	91.50	4.95	86.50	9.19	178.00	4.24	2
females	-	-	-	-	-	-	0
males	91.50	4.95	86.50	9.19	178.00	4.24	2
NON-ESP	80.30	11.76	91.85	10.81	172.14	18.69	244
Asian	83.79	7.33	94.14	5.79	177.93	10.75	14
females	84.57	9.64	96.57	4.08	181.14	11.74	7
males	83.00	4.69	91.71	6.50	174.71	9.39	7
Black	82.12	13.56	92.33	13.48	174.45	22.63	91
females	82.09	12.43	95.46	8.21	177.54	17.66	35
males	82.14	14.33	90.38	15.67	172.52	25.21	56
White	78.61	10.55	90.85	9.00	169.45	15.81	129
females	78.41	11.75	91.54	9.23	169.95	16.94	63
males	78.79	9.35	90.18	8.79	168.97	14.77	66
Other	80.60	11.97	97.20	8.91	177.80	18.47	10
females	80.11	12.59	96.67	9.27	176.78	19.29	9
males	85.00	0.00	102.00	0.00	187.00	0.00	1

TABLE 58. Mean SCAMIN Scores for ESP, Race, and Sex for Seventh through Ninth Grade Students

Students	Academic Self Concept		Academic Motivation		Total SCAMIN		
	M	SD	M	SD	M	SD	N
ESP	98.47	13.10	117.94	12.59	216.41	19.59	32
Asian	98.25	11.09	115.50	13.23	213.75	19.82	4
females	105.00	12.73	110.50	17.68	215.50	30.41	2
males	91.50	4.95	120.50	10.61	212.00	15.56	2
Black	105.75	18.70	118.00	11.28	223.75	20.37	8
females	102.00	16.52	120.00	7.21	222.00	19.00	3
males	108.00	21.41	116.80	13.85	224.80	23.78	5
White	95.53	10.92	119.77	13.98	215.29	20.84	17
females	93.09	10.16	117.27	15.99	210.36	21.06	11
males	100.00	11.75	124.33	8.67	224.33	18.74	6
Other	96.00	1.73	110.67	8.15	206.67	7.24	3
females	98.00	0.00	105.00	0.00	203.00	0.00	1
males	95.00	0.00	113.50	9.19	208.50	9.19	2
NON-ESP	102.75	12.99	119.87	14.55	222.62	23.22	218
Asian	100.48	11.99	120.95	15.23	221.43	23.80	21
females	97.40	4.72	113.00	20.40	210.40	23.90	5
males	101.44	13.48	123.44	13.07	224.88	23.45	16
Black	109.07	13.03	120.95	10.83	230.01	20.21	77
females	108.32	12.41	121.98	10.10	230.30	18.69	44
males	110.06	13.94	119.58	11.74	229.64	22.38	33
White	98.68	10.84	118.82	16.71	217.49	23.52	114
females	98.65	11.48	120.57	16.52	219.22	24.15	63
males	98.71	10.11	116.65	16.86	215.35	22.76	51
Other	107.17	21.73	122.17	10.36	229.33	30.30	6
females	114.50	19.09	124.00	11.31	238.50	30.41	2
males	103.50	24.73	121.25	11.53	224.75	33.74	4

TABLE 59 Mean SCAMIN Scores for ESP, Race, and Sex for Tenth through Twelfth Grade STudents

Students	Academic Self Concept[1]		Academic Motivation[1]		Total SCAMIN		
	M	SD	M	SD	M	SD	N
ESP	105.75	10.90	121.89	11.49	227.64	17.18	75
Asian	110.33	6.71	124.17	11.67	234.50	10.82	6
females	114.00	2.83	119.50	19.09	233.50	21.92	2
males	108.50	7.68	126.50	9.15	235.00	5.83	4
Black	110.89	10.87	121.32	13.00	232.21	18.12	28
females	107.08	12.65	122.69	14.75	229.77	19.22	13
males	114.20	8.08	120.13	11.69	234.33	17.50	15
White	101.00	9.75	121.90	10.59	222.90	16.28	38
females	100.88	11.02	124.25	10.18	225.13	17.52	24
males	101.21	7.49	117.86	10.40	219.07	13.66	14
Other	108.67	7.51	122.67	12.66	231.33	20.13	3
females	-	-	-	-	-	-	0
males	108.67	7.51	122.67	12.66	231.33	20.13	3
NON-ESP	91.24	29.95	102.57	33.41	193.81	62.51	167
Asian	102.64	20.11	121.07	21.42	223.71	39.98	14
females	106.55	10.51	26.91	8.97	233.46	16.03	11
males	88.33	41.05	99.67	41.31	188.00	81.66	3
Black	102.32	24.43	110.83	26.09	213.15	49.40	72
females	98.68	25.27	110.03	29.20	208.71	53.47	34
males	105.58	23.50	111.55	23.33	217.13	45.81	38
White	77.12	31.18	89.90	37.84	167.01	68.58	69
females	80.03	31.98	94.49	39.64	175.52	71.25	33
males	74.44	30.64	84.78	35.90	159.22	66.08	36
Other	92.67	31.23	104.25	34.11	196.92	64.43	12
females	69.50	33.23	82.50	45.96	152.00	79.20	2
males	97.30	30.44	108.60	32.58	205.90	61.95	10

[1] Statistically significant ESP x Race Interaction

(2df), p<.021; F = 2.318 (2df), p<.099). The Self Concepts of primary Asian, Black, and Other ESP groups are somewhat lower than their counterparts in Non-ESP while ESP and Non-ESP White students were equivalent (Table 56). For secondary students, all ESP students have higher scores but White ESP students scores are much higher than their Non-ESP counterparts.

- Academic Motivation -- None of the variables of of race, sex, or program for Seventh through Ninth grade students were statistically significant for Academic Motivation. However, main effects due to sex were evident in the analyses of both of the elementary groups and the high school group (Table 60). The difference at the high school level appear to be large enough to inspire interest. The female high school students obtained a mean Academic Motivation score of 111.5 compared to 105.7 for males (F = 3.240 (1df), p<.070). The First to Third grade females obtained a mean score of 44.22 compared to 43.80 for males (F = 4.867 (1df), p<.027). The Fourth to Sixth grade females obtained a mean score of 93.88 compared to 90.52 for males (F = 4.867 (1df), p<.027).

There was a main effect for race with the Fourth through Sixth and Tenth through Twelfth grade students (Table 54). White students at the earlier level had the lowest mean Academic Motivation score (90.48), followed by higher scores from the

Table 60. Mean SCAMIN Score for Female and Male Students

Females and Males per Grade Grouping	Academic Self Concept		Academic Motivation		Total SCAMIN		
	M	SD	M	SD	M	SD	N
First - Third Grade [1,2]							
Females	44.22	5.11	49.48	4.04	93.70	6.59	108
Males	43.80	5.60	48.20	4.58	92.00	7.86	111
Fourth - Sixth Grade [1,2]							
Female	80.76	12.53	93.88	10.59	174.64	19.74	161
Males	80.93	11.84	90.52	12.27	171.45	20.49	174
Seventh - Ninth Grade							
Females	101.79	12.64	120.24	14.41	222.04	22.73	131
Males	102.66	13.46	119.02	14.217	221.68	23.06	121
Tenth - Twelfth Grade [1]							
Females	95.36	25.18	111.50	29.86	206.87	53.70	119
Males	96.11	27.61	105.76	29.52	201.87	56.17	124

[1] Significantly different Academic Motivation Scores

[2] Marginally significantly different Total SCAMIN Scores

Black (93.47), Asian (94.17), and *other* (95.42) categories of students (F = 2.927 (2df), $p < .05$). The White high school students had the lowest mean academic motivation score (101.26) of all racial groups at that level. They were followed by *other* (107.93), Black (113.75), and Asian (122.00) students (F = 9.840 (2df), $p < .001$).

The Academic Motivation scores of high school students also were affected by the ESP or Non-ESP status of students (Table 55). The mean Academic Motivation score of ESP high school students was 121.37 compared to a mean of 102.44 by Non-ESP high school students (F = 27.888 (1df), $p < .001$).

High school student data on Academic Motivation also contained a statistically significant interaction for race and ESP variables (F = 3.386 (2df), $p < .035$). Table 59 shows the scores for the various racial categories in ESP and Non-ESP. While the scores for ESP and Non-ESP Asian students were differentiated by only a few points (124.17 and 121.07), ESP Black students scores were more highly differentiated from those of their Non-ESP counterparts (121.32 and 110.83). ESP White students had much higher Academic Motivation scores (121.90) than did Non-ESP White students.(89.90).

• • Total SCAMIN Score -- In the elementary grades the Total SCAMIN score was marginally affected by student sex (F = 2.725 (1df), $p < .09$; F = 2.698 (1df),

$p < .09$). Sex had no potency as a variable for Total SCAMIN at the two secondary grade groupings. Further, the range for male and female scores was so narrow in all grade groupings that the differences are of dubious interest (Table 60).

For primary and high school students, ESP enrollment was a main effect ($F = 7.434$ (1df), $p < .007$; $F = 26.903$ (1df), $p < .001$). An examination of Table 55 shows that primary ESP students had a mean Total SCAMIN score of 90.46 while Non-ESP students had a mean score of 93.47, a difference which appears to be too small to generate serious confidence. The ESP high school students obtained a mean Total SCAMIN score of 222.17 in contrast to 193.59 obtained by Non-ESP students, a difference probably worthy of interest.

Scores for students in grades Fourth through Sixth and grades Seventh through Ninth (Table 54) were affected by race ($F = 5.953$ (2df), $p < .003$; $F = 7.589$ (2df), $p < .001$). In Fourth through Ninth grades, White students had the lowest scores (168.83), followed by higher scores from Black (176.69) and Asian (177.47) students. At the Seventh through Ninth grades the same trend prevailed. White students had a mean Total SCAMIN score of 217.45, follwed by the higher scores of Black students (229.14) and Asian students (220.20).

• • Discussion -- The SCAMIN inventory of student attitudes toward themselves as learners was utilized by B.U.S.D. students in order to obtain an understanding of how various groups of students feel about their personal role as a learner in school and about the general goal of achieving in a school setting. As with all attitudes, student academic self concept and motivation are thought to include beliefs such as the appropriateness of particular actions, or beliefs which have a certain emotional or evaluative quality. The attitudes that students hold toward themselves as learners and toward academic goals are believed to have some influence or determining effect on their actual academic behavior. Although this relationship is not inevitable, past research findings on the subject make it reasonable to believe that at least a positive relationship exists between academic attitudes and academic behaviors. Research evidence on attitudes has also demonstrated that a person's self-appraisal is rather resilient and persistent over time (Coopersmith, 1967). Accordingly, it is expected that some time before the middle-childhood years, the individual develops a general appraisal of self-worth which will endure for a number of years.

The SCAMIN measured two components of student attitude: the Academic Self Concept and the Academic Motivation. The Academic Self Concept addressed issues such as role expectations and self adequacy. Role expectations refer to a child's positive acceptance of demands which he/she believes that others are making. Self adequacy refers to the positive regard that the student attaches to chances for success. The Academic Motivation factor which was measured for B.U.S.D. students contained factors for achievement needs and for achievement investment. Achievement needs refer to the positive regard with which a student would perceive the rewards for learning and performing in school. To have achievement investment would be to want to shun the embarassment associated with failure to achieve. It is important to note that if a student has a high degree of academic motivation, particularly in the realm of achievement investment and low self concept, that student is likely to feel considerable anxiety or fear of failing in the school setting.

Three forms of the SCAMIN, each appropriate to a particular age range, were used to survey B.U.S.D. students in the First through Twelfth grades about their Academic Self Concept and Academic Motivation. Because three different forms of the SCAMIN were used, comparisons between grade groupings are constrained except at the secondary levels where all students received the same form. Thus, analyses and conclusions have been related directly to each grade grouping.

1) All Students -- At the earliest grade groupings,

First through Third grade, the SCAMIN results suggested that Academic Motivation was somewhat higher than was Academic Self Concept. This would seem to show that students tended to feel a somewhat greater degree of academic goal pursuit relative to their feelings of academic capability. Thus, although the intensity of their perceived academic efforts was relatively high, they did not necessarily have strong personal feelings of academic strength. Table 54 should be examined with the knowledge that the highest possible Academic Self Concept score for First through Third grade students was 60, and that the highest possible for Academic Motivation was 60. The scores of B.U.S.D. students would be considered medium by the test developer.

In grades Four through Six, it again appeared that the students' level of Academic Motivation exceeded their level of Academic Self Concept. As before, this could be interpreted to mean that their desire to achieve was somewhat greater than were their feelings of academic capability. The Fourth and Sixth grade students attained somewhat lower scores than did the Fifth grade students in the Self Concept and Motivation subscales. The total Self Concept possible for this grade grouping was 120, as was the total possible Motivation score. The test developer regards a score of approximately 100 as a medium level Self Concept or Motivation index. The Self Concept of B.U.S.D. Fourth to Sixth graders would approach his definition of low self concept.

For students in grades Seventh through Ninth, it was again found that the Academic Motivation score was higher than was the Academic Self Concept score. Since the SCAMIN form given to this grade level is the same as that given to high school students, it is possible to make comparisons between grade groupings. It is interesting that the Seventh through Ninth grade students were higher in both Self Concept and Motivation scores than were the high school students. The Seventh, Eighth, and Ninth grades attained progressively decreasing scores in Self Concept. In Motivation, the Seventh and Ninth grade students had the higher scores.

2) ESP and Non-ESP Students -- The analyses of effects on the three types of SCAMIN scores created by participation in ESP resulted in ten significant differences (five main effects and five interactions with race). Only those found at the high school level are large enough to be of interest. If they are reliable and valid, they suggest that ESP high school

students obtained a higher Academic Self Concept and a higher Academic Motivation than Non-ESP high school students. It is very difficult in view of the survey administration problems encountered with high school students to estimate the validity of these results.

3) Racially Different Students -- Race was a significant factor thirteen times (eight main effects and five interactions) in the analyses of the different types of SCAMIN scores. Again, only the range of differences at the high school level appeared substantial enough to generate interest. If reliable and valid it would suggest that Black and Asian students exceeded White students in both Academic Self Concept and Academic Motivation. The problems of administering the scale to high school students requires that these results be interpreted with caution.

4) Female and Male Students -- Five effects based on sex were uncovered by the analyses of the three types of SCAMIN scores. Most interesting was the finding at the high school level that females had significantly higher Motivation scores. The constraints on interpretation of high school data must be applied in this instance also.

● ● Conclusions -- The measures of Academic Self Concept and Motivation used in the B.U.S.D. study presently offer only suggestive lines of evidence. The following series of conclusions should therefore be considered as a baseline for further inquiry. The findings which seemed, due to the magnitude of comparative differences, to be of most interest also happened to occur with the group of students (high school students) for whom the SCAMIN seemed least appropriate. Therefore, the finer analyses at the upper secondary level must be regarded with care.

1) At all four grade groupings, B.U.S.D. students' level of Academic Motivation tended to exceed their feelings of academic adequacy. Interpreted loosely, this suggests that B.U.S.D. students want to suceed in school but do not feel as confident that they are actually doing so. If the levels of performance obtained in previous research by the test developer are considered, (Milchus, 1968), the scores of students in grades One through Three are at a medium level while those for all other grade groups *approach* a low-medium or low level (Refer to Appendix I). It is interesting that the junior high school students attained substantially higher attitude scores than did high school students. Moreover, Twelfth grade students had the lowest Self

concept and Motivation scores of all secondary students. Without additional evidence, it is not possible to conclude why this should be so, but it is one student attitude finding that seems to deserve consideration.

2) The ESP high school students obtained a higher Academic Self Concept and Academic Motivation score than Non-ESP high school students.

3) Black and Asian high school students exceeded White students in both Academic Self Concept and Academic Motivation. In no grade grouping did White students demonstrate higher Academic Self Concept or Academic Motivation scores.

4) High school females had higher Motivation scores.

BERKELEY UNIFIED SCHOOL DISTRICT
EVALUATION STUDY

FINAL REPORT

VOLUME II

VOLUME II

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Basic Skills Curriculum in B.U.S.D.

This section deals with two broad curriculum topics. The first is the curriculum planning process including a discussion of basic skills planning at the district and school-site level, issues of articulation and coordination of the curriculum between grades and schools, opportunities for above and below grade students, and the textbook selection process. The second section deals with the content of the basic skills curriculum both in the elementary and secondary schools. In the elementary schools, the reading and math curriculum is analyzed and in the secondary schools, the English, math, science and social studies curriculum is analyzed.

- The Curriculum Planning Process - Results and Discussion -- In the early 1970's B.U.S.D. developed curriculum plans including specification of some curriculum objectives in a variety of subject matter areas at both the elementary and secondary school levels. None of these plans, however, constitute a set of comprehensive operational objectives for any basic skill curriculum, in that they lacked specificity, they were not complete, nor are they currently being used as objectives by the district or individual schools. The need is not necessarily for a larger set of objectives, but rather for an integrated set of comprehensive objectives.*

There are no other currently developed sets of curriculum objectives for any basic skill area although there is the generally accepted "goal" of one year's growth in reading and math for each year of schooling. This statement serves more as a general evaluation criterion than as an instructional goal as it is rarely used, nor could it easily be used, as a guide for curriculum development. Similarly, the 1975-76 Report on Grade Configuration suggests district curriculum and program priorities but does not operationalize objectives. Currently, a district-wide planning committee is working to develop a comprehensive set of objectives for reading in the district.

The status of operational objectives at the site level is relatively similar. For the most part, school sites do not have operational basic skills objectives to guide their curriculum. Some schools have more global objectives that are the result of participation in special programs such as Compensatory Education or ESP. Compensatory Education schools, for example, basically adopt the

---

*The notion of operational objectives need not be limited to behavioral objectives as defined by Popham and Mager. However it does appear that the objectives ought to describe specific areas of pupil growth rather than teacher or program activity, should be able to guide curriculum development activities and should be measurable either directly as with behavioral objectives or indirectly, using indicators of pupil growth, in the area specified by the objective.

Compensatory Education goals which include statements such as:

> "By the end of the school year, the Compensatory Education students as a total group will display cognitive skills in the area of reading as measured by a 10% decrease on the publisher's norms in the number of students placed in Q1 and Q2 between pre- and post-administration of selected standardized test."

> "By the end of the school year Compensatory Education students as a total group will display cognitive skills in the area of comprehension as measured by a 20% decrease in the number of students placed in Q1 and Q2 between pre- and post-administration of a selected standardized test."

These goals are primarily program goals, but cannot be used as operational objectives to generate actual curriculum. Finally, some schools mentioned that they established curriculum goals for their students on an individual basis and measure student performance against these criteria. However, no school was found where such a set of goals was comprehensive in the sense that it included all basic skills across all grade levels. This is not to say that attempts to date have not been extremely meaningful. It is to say, however, that no school has achieved what could be considered to be a comprehensive set of operational objectives.

Most schools expressed a strong desire to establish more specific operational objectives. They felt constrained, however, for a variety of reasons. First, schools recognize that establishing operational objectives is a very difficult and complex educational task. In fact, some schools have tried to establish operational objectives but with limited success. Second, some schools mentioned that they could not establish objectives because there were no officially adopted curriculum plans. (In this case a circular problem is evident; i.e., which comes first -- objectives or plans to carry out objectives.) Third, most schools felt that the district provided little or no support or assistance in this area. Finally, some schools felt that their educational program was wholistic or organic and therefore that it would be impossible to distinguish curriculm objectives from the total educational process.

In summary then, it was found that basic skills objectives do not generally exist at either the district or site level. Many administrators felt that such a set of objectives would be desirable yet difficult and time consuming to develop.

A similar situation exists in terms of the use of formal curriculum plans. A formal curriculum plan would be a plan which relates instructional activities such as instructional materials, teaching strategies or pupil activities to curriculum objectives. Such a curriculum plan might exist in a more general form at the district wide level or it might exist in a specific, detailed form at the school or grade level. It is formal in the sense that it is written down, widely disseminated and adhered to, and hopefully more thoughtfully prepared than an informal plan might be. Plans have been developed in previous years (e.g., *A Digest of Elementary School Curriculum,* 1968). However, they are no longer used and are literally piled in a storeroom at 1414 Walnut Street. This clearly suggests that the development of plans by no means insures their actual utilization. The lack of district plans has been clearly recognized as evidenced by the priority given to the establishment of a Kindergarten through Sixth grade reading plan this year and adoption of similar plans for other areas in following years.

At the site level, the use of formal plans and the planning process vary according to a number of site characteristics. Overall basic skills plans are not available at the site level either. Instead, either no plans are used, or programs instituted by Compensatory Education and ESP are used, or specific curriculum materials serve as the curriculum focus. For example, PIRAMID is used by Compensatory Education schools, criterion reading is used by non-Compensatory Education schools, HIL is used in both ESP and Non-ESP schools for remedial reading; and Wirtz is used at Kindergarten through Sixth grade schools for math. While these programs and materials are valuable, they cannot totally replace overall basic skills curriculum plans. Moreover, site administrators indicated that, while these programs are adopted officially, this does not necessarily mean that they are in fact used by the staff.

The curriculum planning process also varies by school. Program planning occurs in some schools as a result of federal funding requirements. Compensatory Education, for example, requires a formal plan for each participating school. The planning process for these sites is clearly established by Compensatory Education requirements. For example, the Compensatory Education plan at Malcolm X was developed by a committee of parents, teachers and skill specialists at the school. The committee had to rank order school needs and the information was tabulated by the research department in the district. Each of the nine Compensatory Education schools in the district worked out a similar plan. On the other hand, Follow Through, for example, does not require individual school plans. In those schools not required to develop plans for funds, no plans are developed because neither the district nor the site administrators require it. Several schools in this category mentioned that they have tried to develop plans but have been unsuccessful.

In lieu of a formal planning process, a more informal, decentralized approach is generally used. Many sites, for example, have individual teachers develop their own class or subject plans for the year. These plans are then submitted and approved by site administrators.

Almost all schools recognized a sense of deficiency in curriculum planning, and particularly at the secondary schools where the program by nature, is more complex and diverse. To the extent that planning is done, the schools rely heavily on their skill specialists for coordination and assistance in lieu of the district, since most principals felt that the district does not assist them in curriculum planning.

Though many principals did not perceive any systematic district support, they felt that support was provided on a more individual, personalized basis. Moreover, the sites indicated a sense of ambivalence about the use of formal plans. On one hand, they felt the need for more formal plans, but on the other they felt that formal plans may jeopardize their autonomy.

In summary, then, the district and individual sites do not have formal basic skills curriculum plans and instead use specific curriculum programs, materials or individual teacher plans. While a need for more systematic plans is recognized, concern by site administrators is expressed both because the plans may jeopardize their autonomy and because the mere availability of these plans does not ensure their actual implementation in the classroom.

Aside from adoption of district-wide curriculum plans, there are ways to coordinate and articulate the curriculum both between schools and within a school. Schools within the district are currently using some informal techniques for coordinating the curriculum between schools. Yet, there is wide agreement among principals that coordination between schools is, at present, inadequate and that more coordination is needed.

There have been some coordinating activities between Kindergarten through Third Grade and Fourth through Sixth Grade schools. In some cases there has been a curriculum coordinating committee such as the one set up for Cragmont, Oxford and Columbus. However, this committee met more frequently last year than this year. There have also been visits by teachers between schools and meetings where, for example, the reading teachers at a Fourth through Sixth grade school meet with teachers in the English department of a junior high school to discuss the content of their respective curricula. Several principals also mentioned that the High Potential coordinators reported back to feeder schools the areas of adequate and inadequate preparation among students. Finally, student folders or a sheet which presented information about the student was sent to the receiver school.

It was also clear that curriculum materials such as the Wirtz math materials helped to provide continuity between Kindergarten through Third grade and Fourth through Sixth grade schools. For other subjects, required textbooks provided some continuity but many principals clearly felt this level of continuity was inadequate. Federal programs, as explained above, provide a great deal of the curriculum continuity within a school and to a more limited extent between schools. Several principals felt the PIRAMID management system and the Compensatory Education staff in the district office had helped to provide continuity between schools.

Curriculum coordination within the elementary schools was facilitated by the instructional materials, such as Wirtz math, by instructional management systems such as PIRAMID, and by the skill specialists operating within the school. Coordination was also achieved, in some cases, by student folders or cards kept on each child and by meetings with parents to explain the curriculum for their child either for the current or the forthcoming year.

In the secondary schools, coordination within a school took place within departments. However, there was considerably more curriculum coordination within an elementary school than within a secondary school. Moreover, there was more curriculum coordination within an ESP secondary program than within any one of the regular school programs. This appeared to be possible because the ESP programs were responding to pressure from the district and Washington, D.C. to have an integrated program. Also ESP programs were smaller, which allowed the faculty to meet informally, at lunch, for example.

Coordination between schools at the secondary level was quite weak. For each of the four curriculum content areas discussed in the following section, a serious lack of coordination was reported. There was some between school coordination in career education and some coordination surrounding the HIL reading centers. The rotation of teachers between schools was frequently mentioned as being desirable but appears to have had little impact on curriculum coördination to date. Several principals pointed out that while teacher rotation is desirable, it has several potential problems associated with it. They hypothesized that teachers prefer working with students at certain age levels -- Kindergarten through Third grade in elementary schools and high school at the secondary level. It may be difficult to entice teachers to shift schools even for limited amounts of time. Also, principals want to be sure that the teacher they *receive* is as good as the teacher they *lose*.

- Opportunities for Above and Below Grade Students - Results and Discussion -- Related to the topic of coordination and articulation of the curriculum between schools and within a school is the issue of providing opportunities for students who are significantly above or below grade level in achievement. Historically, it appears that the Berkeley School District has given greater attention to pupils who were significantly above grade level than to those pupils who were significantly below grade level. It is clear however, that students significantly below grade level are currently receiving more attention than in the past.

Students who are considerably above grade level in the elementary schools have been involved in the High-Potential program. Students were selected on the basis of IQ scores or observation of *high potential.* A special effort was made to include minority students who appeared to have high potential even if their test scores weren't extremely high at the present time. The high potential program is a "pull-out" program where students leave their regular class once or twice a week to work with special teachers in an enrichment program that varies from school to school. At Malcolm X, for example, approximately 200 students are involved in the high-potential program. Each student in the high potential program at Malcolm X is involved in two one-hour classes per week which focus on literature, reading and individual research. Other schools have moved into science, music, and arts projects as well.

The pull-out program has been dropped for the 1975-76 school year because of cost considerations and the tension it created in classrooms when those children labeled "smart" left the class while the other children, who could only conclude they were "not smart" were left behind. Replacing the pull-out program will be additional efforts to individualize instruction within the classroom.

At the secondary level, some efforts have been made to provide for students with *identified* ability in English, math, social studies and science. At West Campus (9th grade campus) students with recognized talents have been able to enroll in HUI classes in English and social studies. As with the elementary level high potential program, this program at West Campus has had a racial bias in favor of Anglo children when greater numbers of high potential, but not necessarily high achieving, Black students could be meaningfully involved in the program.

At Berkeley High School, students with identified ability can take advanced courses and receive advanced university placement in English, social studies and math. Independent study programs and specialized courses allow students to pursue special interests and develop special abilities. Moreover, several of the ESP programs at the high school level -- Model School A and School of the Arts -- provide programs which, by design or default, are for students with specialized interests.

A current topic of educational debate involves issues surrounding the high-achieving secondary student. These issues may be important to B.U.S.D. given that the termination of federal funding of ESP will force some policies to be made which affect these students.

The first issue is the ultimate desirability of special programs such as School of the Arts which provide quality programs but which also have the effect of segregating the pupil population by special interests which in this case closely correlate with racial differences. This issue is further discussed in the analysis of the social studies curriculum below. What appears to be needed is a better balance between the need to provide individualized programs to students and the need for different types of students to interact in situations such as basic social studies courses.

The second issue involves the eligibility standards for student participation in some programs. The definitions for High Potential participation have been based upon criterial I.Q. and achievement scores. The issue is what can be done to include students, particularly from minority groups, who have high potential but not prerequisite scores. The racial bias that results from this situation is one aspect of the more general problem of providing a flexible instructional program that avoids being a permanent tracking system for the student.

Finally, the issue of redundancy in the curriculum is important for the high ability student as well as other students. The analysis of the science curriculum below points out the severe redundancy problem in the biology curriculum from Eighth to Twelfth grade. A similar situation exists in other curriculum areas.

For the below average achieving student, the district has recently developed or adopted several program features. It is obvious, at the elementary school level, that the district has made numerous changes in the last several years in serving the needs of the low achievers.

Scheduling small group instruction for the delivery of basic skills is critical to most in-class programs. Hillside, for example, schedules portions of each class weekly in the Art, Music, Food Service, Shop and Media Centers, and in this way reduces the teacher/student ratio for in-class basic skill instruction. Split reading time, where the class is divided usually by achievement, and the student day staggered so that each group arrives and leaves at different times is another scheduling technique. Tutoring by students from the University, and the district is used in addition to parent involvement to assist in delivering basic skills.

Diagnostic programs are concerned primarily with early identification of physical learning disabilities. At Thousand Oaks all Kindergartners are examined through this program for early detection of perceptual-motor problems which can be corrected through instruction.

At the secondary level grouping occurs by subjects and within subjects. At King, students are placed according to their elementary reading achievement scores in either English or Reading Skills. Remedial classes are offered in all subject areas that are required for a high school diploma.

At Berkeley High, remedial classes are identified as basic skill classes. They are offered in English, Science, Math, and Social Science. They tend to operate as a formal tracking system, making it very difficult to move out of the basic skill classes to either the regular or the advanced classes.

Several ESP programs -- College Prep and Agora Genesis are operated at the secondary level for the under achieving student. College Prep, accepting only students reading below grade level, and employing intensified individualized instruction, offers courses preparatory for college. It is one alternative to basic skills classes and a non-college-bound track for the student arriving at the secondary level without grade level competencies. A HILC for reading is operated by College Prep and Agora Genesis in cooperation with Berkeley High. Another HIL for math skills is operated by Model A. These labs provide service to students with weak reading and math skills.

- The Textbook Selection Process - Results and Discussion --

Finally, we will consider the issue of textbook and supplementary materials selection. This issue is closely related to both provisions for above and below-grade level achievers and to the curriculum planning process. Pupils in grades One through Eight use reading and math textbooks selected from a list prepared by the State Department of Education. Each school district selects textbooks for the district so that the textbook decision is a district-wide decision. In the elementary schools, each school is allotted additional money through projects to purchase "supplemental" instructional materials. In fact, these materials often are the basic materials used because the state mandated texts are so inflexible. In some elementary schools, the selection of these supplemental materials is left to the skill specialists while at other schools, the choice rests more with the individual teachers. It is clear that skill specialists are often instrumental in selecting and helping teachers to effectively utilize new instructional materials. It is also clear that project monies provide schools with considerably more flexibility in the area of instructional materials.

Above the Eighth grade, teachers typically use one basic text and several supplemental paperbacks or other books. Another typical pattern is for the course to be based on three to five paperbacks, i.e., no hardbound textbook is used. Text selection is more a matter for specific departments or individual teachers. Teachers usually have a limited fixed amount per teacher to spend from district funds or from ESP funds. It was clear that ESP funds had been used to purchase interesting supplementary books or to provide instructional materials for the HIL labs. Many teachers expressed a concern about the availability of funds for instructional materials once ESP funds were no longer available.

- Conclusions and Recommendations -- Two major conclusions can be drawn from the above discussion. First, both at the district and the site level, comprehensive curriculum objectives and plans and systematic planning procedures are not in use. Instead a more informal, decentralized teacher dominated process occurs. Consistent with this approach, a limited amount of articulation within and between schools is evident. Second, a wide range of innovative programs exist in the district for both high and low achieving students. The district is still plagued by the problems of *de facto* separation of students on the basis of achievement. This separation may be accomplished in the form of pull-out programs or by providing different teaching methods to different skill groups within the same classroom.

1) Curriculum Plans -- The results of interviews and surveys reveal the popular view that a more systematic, coordinated, and comprehensive curriculum is needed in B.U.S.D., particularly in the basic skill areas. The district has already taken steps

to accomplish this objective. If it is to be considered a high priority, additional planning will be needed. For example, the curriculum may need to be articulated in ways especially relevant to the needs of low achieving students. Comprehensive curriculum models would be needed which relate instructional components to pupil outcomes such as reading growth. The model might also speak to the roles of participating parents, para-professionals, or student tutors.

Even if a curriculum plan is developed, the district will be faced with the additional task of implementing it in an effective manner. Three steps should be deliberated before implementation is attempted. First, staff input and participation in the development of the curriculum plan is probably a fundamental requirement for the plan's ultimate acceptance. Secondly, an intensive training program will be needed if the classroom teacher is to fully understand how to use any new plan. Thirdly, if the plans should threaten the teachers' ability to individually and creatively fulfill their classroom responsibilities, it may meet with insurmountable resistance. If the plan is to succeed, teachers will have to feel that it enhances their creative and productive energies and does not stifle their individualism.

2) Eliminating *de facto* Separation -- The second major conclusion involves the issue of separating students on the basis of achievement differences. In this regard, the district has made the decision to eliminate the pull-out system which separates either low or high achievers from their classmates for portions of the school day. However, the district may not be aware that a student tracking system exists at the secondary level that would have to be eliminated if the philosophy of an integrated classroom is to be fully implemented. The district's recently adopted policy of individualized teaching would be compatible with, and would probably foster the goal of eliminating separation on the basis of achievement. It must be remembered however, that individualization is an old approach to education (e.g., the Winnetka plan of 1911) and one of its many forms calls for the consistent tracking of varying achievement groups within the classroom (Hambleton, 1974). Thus, the implementation of individualization in the service of integrated classrooms requires the clear operationalization of the form of individualized teaching to be employed.

It is clear that underachieving youth, particularly at the secondary level, have a number of of problems which are not being eliminated by pull-out and remedial programs, and these raise important issues for B.U.S.D. to deal with. Specifically, remediation is designed to correct the child's problem and then integrate the child back into the regular program. But in fact, it appears that most underachieving students remain in these classes permanently. In contrast, B.U.S.D. contains a few experimental programs which are explicitly designed to upgrade the student without formally labeling that student (e.g., College Prep). The success of these programs should be observed and perhaps extended should they be proven to be effective. Pull-out programs can have a very serious effect on children in terms of the labeling problem. Students clearly perceive themselves in the "smart" or "dumb" group. In-class programs for the underachieving child where individualized instruction is conducted could mitigate against labeling. It is also a form which provides for a more varied approach to the delivery of basic skills.

- Content - Elementary Reading/Language Arts Curriculum - Results and Discussion -- The following discussion concerns teachers' responses to the survey questions dealing with the degree of emphasis they place on specific reading skill. Of the reading skills considered by reading and language arts specialists to be an important component of elementary education, a comprehensive sampling exists. Although to a lesser extent, a comprehensive sampling also exists of elementary language arts skills.

The following discussion has been based on the assumption that teacher's responses to the survey questions represent an accurate reflection of their actual classroom practices. There are a number of factors such as poor wording, ambiguous questions, etc., inherent in any survey that affect the responses and would tend to weaken the validity of the above assumption. The most important factor for the particular set of skill questions surveyed here is a response bias in favor of reporting what they are expected to do regardless of whether or not they are actually doing it.

It is no secret that the school district administration as well as the current conventional wisdom favors heavy emphasis on skills and expects teachers to conform to these expectations. Thus the high percentage of teachers reporting that they emphasize the skills surveyed may reflect to some unknown degree their desire to verbally conform to the district's expectations rather than their actual classroom practices. This possibility should be taken into account when reading and judging the description, conclusion, and recommendation of this report.

- Decoding* Skills -- The first set of skills to be discussed are decoding or phonics skills. This set can be further subdivided into prerequisite skills, decoding units, and decoding strategies.

  1) Prerequisite Skills -- The prerequisite skills are Left to Right Sequencing, Auditory Discrimination, Visual Discrimination, Letter Names and the Correspondence between Printed and Spoken Words. These skills are believed by most experts to be the necessary beginning skills to learn to read. They should be taught at the very beginning stage of learning to read and should receive heavy emphasis in Kindergarten and First grade with some emphasis in Second and Third grade. Letter names need no emphasis beyond First grade. In the intermediate grades they should receive no emphasis except for those students who are unusually poor readers. Students who are reading at Third grade level or above will have already mastered these skills.

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*Decoding refers to producing the appropriate pronunciation from printed words.

Table 61 presents the data on the prerequisite skills in terms of the percentage of teachers who indicated strong or moderate emphasis on the five prerequisite skills. For the above grade level readers all five skills are emphasized by most teachers in Kindergarten. The percentages drop off as grade level increases. However, a reasonably large percentage of intermediate grade teachers also emphasize these skills. With the exception of Letter Names, from 12 to 61% of the teachers in the intermediate grades emphasize prerequisite skills for the above grade level students.

For the at grade level readers, most teachers teach these skills in grades Kindergarten through Third. However, a substantial proportion of intermediate grade teachers also teach these skills. In fact, for Auditory Discrimination, Visual Discrimination, and Correspondence between Printed and Spoken Words skills, the average in grades Fourth through Sixth is 70% and above.

For the below grade level students the same pattern exists except the percentages are higher. Most primary grade teachers emphasize the five skills. However, well over 70% of the intermediate grade teachers also emphasize these skills.

The pattern that emerges is large percentages of primary teachers emphasizing these skills with the percentages increasing as reading ability decreases.

Table 61. Prerequisite Skills of Decoding

Percentage Teachers Emphasizing

Skill	Above Grade							At Grade							Below Grade						
	K	1	2	3	4	5	6	K	1	2	3	4	5	6	K	1	2	3	4	5	6
Left to Right Sequencing	93	38	29	16	22	30	12	100	94	71	57	44	65	32	100	89	94	91	84	75	72
	[1]44				21			81				47			94				77		
Auditory Discrimination	96	65	56	26	48	40	25	100	88	95	86	78	85	46	100	100	100	95	100	95	83
	61				38			92				70			99				93		
Visual Discrimination	96	71	78	37	57	37	25	100	94	95	86	88	85	46	100	100	100	100	100	100	83
	71				40			94				73			100				94		
Letter Names	85	30	6	16	14	11	0	96	77	38	40	33	37	22	100	100	100	76	86	65	58
	34				8			63				31			94				70		
Printed Words Correspond to Spoken Words	92	77	59	33	61	45	21	83	95	94	85	88	80	48	83	88	100	95	96	95	80
	65				42			89				71			92				90		

[1] Mean % By Grade Group

The same pattern is repeated for intermediate grade teachers except that the percentages are generally smaller.

Since there is no need for these skills to be taught beyond Second or Third grade at the very latest, except for the most severely retarded readers, although substantial percentages of intermediate grade teachers report emphasizing these skills, the inescapable conclusion is that there is a considerable degree of teaching of these unnecessary prerequisite skills in the intermediate grades.

In addition, the data indicate that large numbers of students are exposed to the same prerequisite skills year after year even though their reading achievement indicates that they have already mastered these skills.

2) Decoding Units -- The decoding units are consonants, short vowels, long vowels, vowel digraphs and dipthongs, phonograms, compounds, prefixes and suffixes. In learning to read children must learn the phonetic correspondences to these graphic units. For above and at grade level students these units should be fully mastered by the end of grade three with the exception of compounds, prefixes and suffixes. For below grade level students the mastery of these units can extend into the intermediate grades, with the exception of consonants. Compounds, prefixes and suffixes

can be emphasized in intermediate as well as primary grades.

Table 62 presents the tabulation of percentages of teachers emphasizing the decoding units.

The pattern is similar to that of the prerequisite skills. Substantial percentages of primary grade teachers emphasize all these decoding units for all three reading ability groups. As Table 62 shows, the percentages range from 80 to 100% for at and below grade level students in the primary grades.

In the intermediate grades a large percentage of teachers also emphasize these units. For the above grade level students the percentages range from 34% to 74%. For the at grade level students the percentages range from 71% to 97% and for the below grade level students the percentages range from 92% to 99%.

These percentages indicate that too many intermediate grade teachers are emphasizing decoding units that are unnecessary for their students since they have been mastered by them in the primary grades.

In addition, the high percentages of teachers that emphasize these units at all grade levels indicate that students are taught the same decoding units year after year even though their reading skill would indicate that they have mastered these skills.

Table 62. Decoding Units for Kindergarten Through Third and Fourth Through Sixth Grades

Percent Teachers Emphasizing

Skill	Above Grade		At Grade		Below Grade	
	K - 3	4 - 6	K - 3	4 - 6	K - 3	4 - 6
Consonants	64	38	96	77	96	94
Short Vowels	68	34	96	71	94	97
Long Vowels	71	39	98	75	87	95
Vowel Digraphs & Dipthongs	80	48	100	80	80	96
Phonograms	87	45	100	72	94	92
Compound Words, Prefixes, Suffages & Roots	95	74	96	97	80	99

3) Decoding Strategies* -- The decoding strategies include syllabication, blending, spelling patterns, using context to recognize words, and using shape or configuration to recognize words.

Table 63 presents that data from teacher responses to the decoding strategies. Each strategy or group of strategies is discussed below.

Syllabication is a strategy for decoding words of more than one syllable. It is usually emphasized in grades two or three through six where students encounter words of more than one syllable. Table 62 shows a high percentage of teachers emphasizing this skill at all grade levels for students of differing reading abilities. The relatively smaller percentage of teachers, 62%, emphasizing this strategy for below grade level students in primary grades indicates that these students are not reading well enough to encounter polysyllabic words where this strategy could be employed.

There is some question, however, about the usefulness of syllabication, especially the way it is usually taught, as a means of improving decoding skills. Although it is taught by a high percentage

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*Although Pacific Consultants presents the following findings with confidence, it should be understood that the usefulness of various decoding strategies is a controversial topic.

Table 63. Decoding Strategies for Grades Kindergarten through Third and Fourth through Sixth

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Percent Teachers Emphasizing

Skill	Above Grade			At Grade			Below Grade		
	K - 3	4 - 6	K - 6	K - 3	4 - 6	K - 6	K - 3	4 - 6	K - 6
Syllabication	94	77	86	90	94	92	82	94	78
Blending letters or letter groups	73	45	59	98	84	91	89	87	93
Contrasting spelling patterns	57	30	44	93	60	77	98	89	94
Using context to recognize words	93	81	87	100	92	96	95	94	95
Using phonics to recognize words	86	56	71	96	92	94	98	99	99
Using shape or configuration to recognize words	36	23	23	56	57	57	78	80	79

of Berkeley teachers, it is an essential skill for only some stages of reading development (i.e., the morphological level).

Blending and spelling patterns are alternative or complementary components of a sequential analytic word recognition strategy. They are most useful in the primary grades for decoding monosyllabic words. Table 63 shows that large percentages of teachers emphasize both of these strategies. For at and below grade level readers the percentages are over 90%. In the intermediate grades, a substantial percentage of teachers emphasize these strategies. It is not at all clear that above and at grade level readers in the intermediate grades need these skills. While some below grade level readers may need these skills, the data indicates that nearly all their teachers emphasize it.

The high percentages shown for both skills indicate that in many classes they both are emphasized particularly for low readers. Since they are in some ways contradictory strategies they may be confusing for some students.

The next three strategies, context, phonics, and shape, are alternative ways of decoding unknown words in sentences. The first two strategies are useful and there is some debate in the field as to which is more useful. Table 63 shows that large percentages of teachers in all grades emphasize context and phonics strategies. Context seems to have the edge for the above grade level readers while for the other two groups both strategies are emphasized equally. The shape strategy is a less useful one and should be de-emphasized. The data show that this is the case for the above grade level students where only 23% of the teachers emphasize it. 57% and 79% of the teachers emphasize it for the at and below grade level students respectively. These percentages are excessive for a skill of dubious value. The use of it for below grade level students is dubious and may contribute to their poor reading.

Overall the data on decoding strategies show heavy emphasis on all the strategies. It also shows that Berkeley teachers tend to be eclectic and do not stick with one strategy. Further the data show too much emphasis on unnecessary strategies, blending and spelling patterns, in the intermediate grades.

The analysis of teacher responses to decoding skills leads to the following conclusions:

a. A large percentage of teachers are emphasizing most of the decoding skills surveyed.

b. There is a marked tendency to emphasize unnecessary skills in the intermediate grades where students' reading skill would suggest they have already mastered these skills. This problem is particularly acute for the prerequisite skills.

c. A few skills, e.g., syllabication, shape, are emphasized even though they are of dubious value.

d. Students are exposed to the same skills year after year even though they may have mastered these skills.

e. The large percentage of teachers in each grade reporting emphasis on the decoding skills surveyed indicates that teachers do not have a very good idea of what skills were emphasized in previous grades and whether or not their current students have mastered these skills. It further suggests that teachers, particularly in the intermediate grades, are not assessing the decoding skill needs of their students. If they were aware of their students' decoding skill needs they would not be emphasizing skills that their students clearly have mastered. 65

• • Vocabulary Skills - The vocabulary skills surveyed were synonyms and antonyms, using context clues to derive word meanings, multiple meanings of words, word origins, prefixes, suffixes and roots, denotation and connotation, and words from content area texts. The data on these skills are presented in Table 64 Table 64 shows that an almost uniformly high percentage of teachers at all grades emphasize all these skills for students of differing reading skill. The only exceptions are word origins and denotation and connotation where the percentages are lower than the other skills, particularly for below level readers in the primary grades.

Most Berkeley teachers, with the exceptions noted, emphasize all of the vocabulary skills surveyed. The

Table 64. Vocabulary Skills for First Through Sixth Grades

Percentage of Teachers Emphasizing

Skill	Above Grade			At Grade			Below Grade		
	K - 3	4 - 6	K - 6	K - 3	4 - 6	K - 6	K - 3	4 - 6	K - 6
Synonyms & Antonyms	98	94	96	98	100	99	77	98	88
Context Clues to word meaning	91	94	93	94	100	97	97	99	98
Multiple meaning words	93	96	95	93	99	96	77	83	85
Word origins	65	86	76	54	84	69	25	74	50
Prefixes, suffixes & roots	92	97	95	96	100	98	69	97	83
Denotation & connotation	74	89	82	67	93	80	29	79	54
Words from content area subjects	83	93	88	83	97	90	80	89	85

poor showing in reading of minority students in the intermediate grades where vocabulary is an important component of reading success suggests that although vocabulary skills are emphasized these students are not mastering these skills. It further suggests that the way these skills are taught is more important than the mere fact that they are emphasized. It appears that the quality of the teaching of vocabulary skills needs to be improved.*

● ● Comprehension and Study Skills -- The comprehension and study skills surveyed are presented in Table 65 For the comprehension skills Table 65 shows an almost uniformly high percentage of teachers emphasizing all the skills at all grade levels. The exceptions to this trend are the lower percentages of primary grade teachers emphasizing understanding of propaganda techniques for the above and at grade level readers and the lower percentages of primary and intermediate grade teachers emphasizing this skill for the below grade level students. In addition the primary grade teachers show relatively lower percentages emphasizing

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*It should be noted that some reading specialists feel that mastery of the component skills by themselves does not produce good readers. According to this view, what children need most is reading practice, where the content is of value to them. As they become more fluent readers, they acquire vocabulary and comprehension skills; whereas, decoding or component skills run the risk of creating boredom with reading.

Table 65 Comprehension and Study Skills for First Through Sixth Grades

Skill	Above Grade			At Grade			Below Grade		
	K - 3	4 - 6	K - 6	K - 3	4 - 6	K - 6	K - 3	4 - 6	K - 6
Identifying main ideas	95	94	95	94	100	97	86	99	93
Recalling details	96	96	96	100	98	99	96	94	95
Identifying cause & effect relationships	96	97	97	98	100	99	73	91	82
Interpreting figurative language	91	96	94	81	94	88	57	81	69
Critical reading	84	99	92	83	100	92	61	84	73
Determining author's purpose, motives, etc.	89	93	91	85	95	90	46	76	61
Understanding propoganda techniques	44	85	65	39	81	60	20	50	40
Study Skills									
Using dictionaries	96	94	95	87	100	94	51	97	74
Using index & table of contents	94	94	94	88	99	94	68	97	83
Summarizing	86	99	93	74	97	86	60	91	76
Outlining	55	89	72	45	81	63	23	65	44
Skimming	75	92	84	63	94	79	32	68	50
Locating information	94	97	96	89	100	95	68	97	83
Increasing reading speed	73	73	73	78	77	78	57	70	64
Reading maps, tables, graphs, etc.	93	93	93	80	95	88	59	91	75
Using flexible rate to suit purposes	78	88	83	75	83	79	58	71	65

figurative language, critical reading, noting the authors' tone, motive, etc., for the below grade level students.

The study skills show a similar but slightly different pattern of almost uniformly high percentages of teachers emphasizing all the skills for the above and at grade level students. Outlining, skimming, speed and flexible rate show somewhat lower percentages. For the below grade level students the percentage of teachers emphasizing study skills is somewhat lower than for other students. The percentages of primary teachers emphasizing study skills is markedly lower, particularly for outlining and skimming. These lower percentages could indicate more attention to students' decoding skills needs which are necessary prerequisites to many study skills. Thus, the lower percentages are quite appropriate for these students.

The generally high percentage of teachers emphasizing comprehension and study skills, when taken in conjunction with the generally poor performance of minority students and others on these skills, suggests that, as with the vocabulary skills, there is a problem in the quality of the teaching of these skills. Teachers need to find newer and better ways of teaching these skills.

• • Language Arts Skills -- The language arts skills surveyed were spelling, handwriting, punctuation, grammar, listening, expository writing, and creative writing. Table 66 presents the data for these skills. The data show once again an almost uniformly high percentage of teachers emphasizing these skills. The exceptions are the teaching of grammar and expository writing, where lower percentages of primary grade teachers emphasize these skills.

Even though there are somewhat lower percentages of teachers emphasizing grammar, there are still substantial percentages of teachers emphasizing this skill. The usefulness of this skill is dubious at best. There is no evidence in the research literature to suggest that it helps to improve writing or speaking skills. The usefulness of it as a skill for its own sake is questionable, since it takes time away from other important skills. Consideration should be given to de-emphasizing or dropping it since its usefulness is in question.

The high emphasis of teachers on the other language arts skills and the poor showing of Berkeley students on these skills, particularly minority students, suggests that the quality of the methods used to teach skills should be examined for ways to improve them.

Table 66. Language Arts in Grades Kindergarten to Third and Fourth to Sixth

Percentage Teachers Emphasizing

Skill	Above Grade			At Grade			Below Grade		
	K - 3	4 - 6	K - 6	K - 3	4 - 6	K - 6	K - 3	4 - 6	K - 6
Spelling	96	93	95	100	98	99	80	96	93
Handwriting	92	89	91	96	92	94	96	92	94
Punctuation	98	95	97	98	97	98	77	93	85
Grammar	77	93	85	72	94	83	49	91	70
Listening skills	98	92	95	100	98	89	98	97	98
Expository writing	83	93	88	77	94	86	49	82	66
Creative writing	97	97	97	96	99	98	89	97	93

• • Materials -- The survey included a question concerning the materials, including teacher-prepared materials used in reading and language arts instruction and the percentage of time devoted to these materials. Table 67 presents the data on materials used. The data indicates substantial usage of teacher-prepared materials, 29% in the primary grades and 40% in the intermediate grades. It also indicates greater usage of teacher-prepared materials in the intermediate grades.

As far as commercial materials are concerned, the state-adopted Macmillan and Harper-Row show the next highest usage in the primary grades, 18% and 12% respectively. The other materials are used less than 10% of the time in the primary grades. In the intermediate grades only Harper-Row is used more than 10% of the time.

The "other" category includes fifty-six different materials in the primary grades. Of the fifty other materials, SRA, library books, paperback books, S.W.R.L., and Houghton-Mifflin are the most widely used. In the intermediate grades twenty-two different materials are reported with Scott-Foreman, SRA, paperback books, and library books receiving the widest usage.

The overall pattern of responses to this survey question indicates the B.U.S.D. teachers use a wide variety of materials at all grade levels and they devote a considerable amount of time to teacher-prepared materials.

Table 67. Reading and Language Arts Instructional Materials

Percentage Of Time Used

Materials	K - 3	4 - 6	K - 6
Teacher-prepared materials	24	40	32
Sullivan Programmed Readers	04	02	03
*Harper-Row readers & workbooks	12	14	13
Ginn Enrichment	02	01	02
*Bank Street	05	02	04
Lippincolt	07	02	05
**Sounds of Language	02	02	02
*MacMillan	18	06	12
Other	[1]25	[2]30	28

*State adopted until 1974-1975

**State adopted supplemental until 1974-1975

1=other category for K-3 includes 56 different materials

2=other category for 4-6 includes 22 different materials

- Reading/Language Arts Time -- Table 68 presents the data for teachers' reports of the instructional time devoted to reading and language arts. The data show an increasing amount of time spent on reading and language arts up until grade three, then a decreasing amount of time in grades four and five and a slight rise in grade six. The data also show a trend toward more time devoted to groups of students with less reading ability. The actual amount of time per day is underestimated in this survey, since large proportions of teachers checked the top category, seventy-five minutes or over, causing a ceiling effect. However, the trends between grades and reading ability are probably valid.

Even though more time is devoted to below grade level students, the differences between the amounts of time devoted to above and at grade level students and below grade level students are not very substantial. Since below grade level students need more help in mastering reading and language arts skills than students who are successfully mastering these skills, the data suggests that more time than is presently allocated might need to be devoted to below grade level students. However, the way that time is used is as important as the amount of time devoted to reading.

- Teaching Standard English -- The skills survey includes three skills that allow a limited look at the question

Table 68. Instructional Time in Reading and Language Arts

Minutes Per Day

Grade	Above Grade	At Grade	Below Grade	All
K	50	53	56	53
1	66	68	74	69
2	66	67	78	70
3	80	81	85	80
4	69	73	78	73
5	61	65	68	65
6	64	67	70	67

of meeting the needs of minority students. The issue of concern is the question of emphasis on Standard English speech. Since many minority students speak a non-standard dialect, there is the question of the degree of emphasis on Standard English speech as it relates to the acquisition of reading and language arts skills.*

There is evidence, and a growing concensus among reading specialists, that changing dialect-speaking children's speech through instruction in school is difficult if not impossible; and, that attempts to do so as part of reading instruction, particularly in the primary grades, may actually interfere with learning to read. Thus, heavy Standard English emphasis, at least in the elementary grades, may be counter-productive.

The three skills that address this issue are plural, past and possessive "s" morphene, correct pronunciation, and correct grammar. They are presented in Table 69 Table 69 shows large percentages of teachers emphasizing these skills in all grades for all reading ability groups. Even though there are lower percentages for the below grade level students who tend to be non-standard speakers, the percentages are still quite high. Special provision can be made

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*Most of this discussion refers to Black students' language. Asian and Chicano students have some of the same language problems but the issue is different and more complex since a second language is involved.

Table 69. Emphasis on Standard English Instruction

Percentage Teachers Emphasizing

Skill	Above Grade			At Grade			Below Grade		
	K - 3	4 - 6	K - 6	K - 3	4 - 6	K - 6	K - 3	4 - 6	K - 6
At S Morphene	94	85	90	96	99	98	76	97	87
Standard Pronounciation	86	87	87	90	92	91	83	91	87
Standard Grammar	94	90	92	94	92	93	87	86	87

to teach the "s" morphene in a way that will not confuse non-standard speakers; however, few teachers and reading materials make these special provisions.

Table 69 suggests that, in the view of a number of reading specialists, there is too much emphasis on Standard English speech, and that there is a need to re-think the whole question.

Conclusions -- The foregoing analysis of teacher responses to Teacher Survey-Part III questions regarding skills, materials, and time variables leads to the following general conclusions:

1) There is a heavy emphasis on most reading and language arts skills in the elementary grades. The heavy skill emphasis and the poor showing of minority students suggests that revised methods of skill teaching should be considered.
2) There is some emphasis on skills of dubious value, a fair amount of emphasis on skills at inappropriate grade levels, and some teaching of contradictory skills. Skills which have not been demonstrated to have positive value for reading should be deliberated with the possibility of de-emphasizing or eliminating them.
3) Students are exposed to the same skills grade after grade, indicating that teachers do not seem to be aware of which skills have been mastered by students in previous grades.

4) Teachers are using a wide variety of reading and language arts materials. No particular set or sets of materials are emphasized to the exclusion of others.

5) There is extensive use of teacher-prepared materials.

6) Some differences, although not large, exist in the amount of time devoted to reading and language instruction in different grades and with students of different reading abilities. More time, and perhaps revised methods, need to be devoted to below grade level students.

7) There is too much emphasis on teaching Standard English to non-Standard English speakers. The emphasis on Standard English for non-standard speakers needs to be eliminated, particularly in the primary grades.

8) A skill testing program* needs to be instituted so that teachers will know which skills students have mastered in previous grades. The results of these tests should be available to the student's current teacher.

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*The testing program should be carefully thought out, should cover a minimum set of skills, and should take place at least twice a year. It should not overburden the teacher and students, and should be easy to administer. The results should be easy to understand and use. Moreover, the skill testing program should be developed hand in hand with curriculum plans.

9) When changes in the reading curriculum (such as those suggested above) are developed, they will require extensive in-service training in which teachers are allowed a strong voice.

- Content - Secondary English/Language Arts Curriculum-Results and Discussion --

  - Course Offerings -- Classes in the junior high schools include regular English classes for Seventh and Eighth grade pupils at expected levels of attainment, High Potential English, Drama, Remedial English, and many for pupils having difficulties with reading. There have been experiments such as a Language Arts Seminar designed "Specifically to involve the Black experience" (King). At West Campus there is an HIL program for underchievers who are attempting to rise to grade level, journalism, a High Potential English program, and reading courses for those who score low in reading. At the senior high level, the proliferation of courses is even greater: Drama, Creative Writing, Radio and Journalism, Composition, and many others. In the ESP Schools the English courses are further modified to fit the needs and interests of pupils in those schools. Furthermore new courses appear from year to year. For instance one English teacher mentioned, "I have just created a new, course, essentially Black literature but in a context of American literature."

    At the junior high school level pupils are counselled and placed in courses in terms of their reading scores and their previous success with English. At the senior high level, similar procedures exist. Additionally, there are the ESP Schools for special groups of students and to some extent as the chairperson reports: "Our students self-select courses and instructors."

- • The Curriculum -- As indicated above, the English curriculum from grade Seven through Twelve reflects almost no coordination through district-wide planning. There does, however, exist a clarification of the objectives for English which the junior high schools are in the process of writing. However, at all levels there is evidence of commitment to excellence in instruction by teachers who are professional and proud of their work. This committed but individualistic approach to curriculum is the opposite of a more carefully planned articulation of instruction. Both ways have advantages and disadvantages, but the interviews indicate that English instruction in Berkeley would profit from an increase in district curriculum planning.

Thus, at the present time, Berkeley does not have genuine articulation from Kindergarten through the Twelfth grade. There is no agreement -- or at the most, tacit agreement on limited topics -- on what aspects of English need to be stressed at various levels or what, indeed, needs particular emphasis, light emphasis, or exclusion. It is neither easy nor inexpensive to achieve curriculum planning in anything so complex as language, literature, and reading. Consequently, Berkeley has to some extent, by necessity, accepted the method of permitting busy, professional teachers to plan their own courses without reference to any accepted plan.

The teachers follow various paths; some mention consulting the California State Framework in English (this is a guide to curriculum development, not a curriculum); King and Willard Junior High Schools are building their own curriculum plans through grade level cooperation. The District outline of 1966 is out of print, and in lieu of such an outline, various experiments and alternative programs have appeared. Many teachers are creating their own course outlines, fitting them to the needs of their students as they teach. For instance, one junior high teacher is very much involved in teaching language as a means of clarifying thinking and of expanding perception. He emphasizes effective communication as well as creative expression and enjoyment of language. Much of this is carried out through assignments in writing, but oral language is also stressed. His course, for all students who take it seriously, is an example of what education ought to be everywhere.

In terms of equality of opportunity in English, teachers' attitudes and their efforts as described by them show a desire for all pupils to receive the best possible education, one that will enable pupils to use language with power and effectiveness. The teachers are trying to find the methods and content that will induce pupils of every social, ethnic, and economic background to make the effort to gain a sound language education. A range of experiments shows how teachers are trying to draw the various ethnic groups into an awareness of the importance of thinking clearly and expressing oneself effectively.

Equality of educational opportunity does not imply identity of program for all pupils; differences in background, energy and health, ability, and future plans make necessary variations in language and literature content. The English program shows evidence of an effort to provide many roads toward success. For instance, one secondary school tried an experimental English course designed specifically to involve the Black experience. Despite its intention to generate pride in the Black pupil's cultural heritage, the course did not succeed. Although the details surrounding this experiment were not available to the evaluators, it appears to be an example of the fact that some efforts of this type will be controversial. But this may merely be a reflection of the fact that schools are a part of a dynamic society.

In another effort to expand the multi-cultural aspects of English courses, a high school course is centered upon Black literature but set in the context of American literature with emphasis upon universality of experience, upon the examination of values, and upon rational discussion. Teachers at one of the junior high schools report that their courses are designed to improve student's knowledge of different cultures and social experiences. One department chairperson described the outreach for a more pluralistic clutural approach as follows: "We use Black literature widely. We are lacking in what we do with other cultures, but we are trying. At this point our problem is lack of materials."

One of the strong features in Berkeley's secondary English program is its emphasis on drama. In many other cities the English program does not realize how valuable drama is in building that self confidence and ease of speech basic to effective language. In turn, the spoken language is the foundation of excellence in reading and written composition.

Language power is something far deeper than conventions such as spelling, punctuation, pronunciation, capitalization and other similar peripheral skills, and the interviews show that the English teachers have a mature understanding of this point. Their answers focus on the more important matters of clear thinking: organization of ideas, coherence, ease and confidence with speech, and sensitivity to the listener or reader who will receive one's communication. (This does not imply that they neglect the lesser skills such as spelling; indeed they do mention the mechanics as well as the major elements of language).

It is a dangerous oversimplification to reduce power over language to what are so often misnamed "basic skills" -- spelling, explicit knowledge of grammar, punctuation. These are not the true fundamentals of language. Most of the Berkeley teachers interviewed gave answers which indicated their concern with good English not only in details but also in the larger strengths of language. Many of them spoke of good organization of ideas, of coherent thinking, of feelings expressed without confusion. These aspects of English are not easy to teach, but a perspective emphasizing the lesser skills rather than the more complete picture of power over language never will nurture growth in expressing thought and feeling.

Standard pronunciation, for instance, is important but is certainly not as important as having something to say and organizing it in terms of a purpose and a listener.

The interviews included questions on grammar and usage, and the answers to these questions varied considerably. Not all of the teachers distinguished between grammar and usage, and few of them seemed certain of the best ways to give attention to these elements of the English curriculum.

Grammar is the technical description of the syntax and structure of the English language. Grammar deals with case, agreement, arrangement of words in sentences, nomenclature -- matters of this technical kind. Usage is the habitual way an individual expresses himself or herself; it is not dependent upon a knowledge of grammar.

Several of the interview questions dealt with the important topic of social class dialect and non-standard English. Throughout the United States, many teachers of English are unfamiliar with recent linguistic scholarship showing that non-standard speech is not a matter of carelessness but is rather a respectable and competent form of communication. Black English, for instance, is not "wrong", "bad English", nor "incorrect". Teachers unfamiliar with linguistic scholarship are often punitive about what they call "poor English", they try to eradicate the child's dialect in order to replace it with the prestige dialect known as Standard English. Knowledgeable teachers, on the other hand, seek to motivate the pupil who speaks a non-standard dialect to desire the option of using the standard dialect in addition to pride in his or her own family's way of speaking.

In Berkeley, the teachers interviewed showed familiarity with the impossibility and the inhumaneness of trying to eradicate a non-standard family way of speaking. However, they are vague about the best strategies to employ in giving pupils the option of standard as well as non-standard English. Typical statements such as these show a proper respect for the pupils' language, but do not clarify any position on strategies for help:

> "I don't try to change it; that's not my right nor is it possible. I try to provide an alternate 'suit of clothes to wear when needed'." (How this providing is accomplished remains undisclosed, and probing did not bring forth any genuine plan for teaching.)
>
> "I try to instill the importance of knowing standard English, but I try not to belittle any genuine speaking pattern." (This is a good attitude, but

> it does not go far enough to be of assistance to the pupil in gaining the option of standard English.)
>
> "As a Black, I have a special point of view. I consider language a tool. One learns standard English as an alternative. It's like clothing. If you have two pairs of shoes you have options." (This is an excellent attitude, but there are no suggestions about how to acquire the additional clothing, the extra pair of shoes..)

The interviews reveal a great concern with reading, and a great many students in Berkeley are in classes to help them bring their reading skills up to high levels. Both in the curriculum and by the teachers, there is no lack of effort expended upon the reading problem. The reading problems identified by the teachers are typical of any metropolitan school in the United States: decoding, comprehension, and vocabulary for students reading at the lowest levels (elementary school level); vocabulary, attitudes favorable to reading, seeing relationships among concepts at the average level; discrimination and critical reading at the superior levels. Scanning with good comprehension is occasionally mentioned as a problem for the average and better readers.

The students are placed in reading classes by a combination of methods. The well known Nelson and Gates tests are used; teachers listen to oral reading, using the diagnostic scale developed by Gray. At the senior high level the diagnosis is often by the Gates-McGinities and CTBS standardized tests. Willard Junior High also uses the Stanford Reading Diagnostic test. The methods of instruction reflect all the strategies typical of any California school system: reading laboratories (i.e., HIL) in which the pupils have a variety of assistance with easy reading, books, skill builders, comprehension exercises, vocabulary study, encouragement of wide and interesting reading. The only methodology not mentioned is the very recent and impressive approach called miscue analysis.*

The literature program, as well as reading, is important because it enlarges our awareness of values, refines our discrimination among values, and can open the awareness of a reader to widen and deepen perceptions and organizations of experience.

The secondary schools in Berkeley certainly use all types of literature. They study new classes and review old ones, Shakespeare and modern drama, teenage classes and adult novels ; they organize by themes, types, and chronology. The objectives are stated well and clearly formulated: to appreciate literature as an art form, to broaden perspectives and understanding of the human condition, to encourage enlightenment and understanding of different cultures, to relate the implications of literature to the students' own lives. The materials cover a remarkable spectrum and vary according to the teacher's estimate of what will most involve the students: Walt Whitman, Ray Bradbury (science fiction), Langston Hughes, Arthur Miller (The Crucible) Shakespeare, Richard Wright (Native Son), John Knowles (A Separate Peace) -- these are just a few of the many titles mentioned or listed. Films are also used, and several teachers mention success with them. From the interviews, this reviewer can find nothing to criticize negatively concerning the program in literature.

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*This is a method of studying the child's reading developed by Dr. Kenneth Goodman at Wayne State University. A brief indication of its nature might be to say that it includes graphophonemic analysis but adds to that typical and usual form of decoding instruction the further elements of syntax and semantics. The method is fully described in two publications of the National Council of Teachers of English: Miscue Analysis Kenneth S. Goodman, editor and Help For the Reading Teacher, New Directions in Research William D. Page, editor.

• Conclusions -- The information gathered in the interviews with secondary English teachers resulted in the following conclusions:

1) The entire language and literature program in the Berkeley Unified School District would profit from greater coherence and district planning. However, such planning cannot be done after school by committees of busy teachers already struggling with the problem of enough time and energy to make

instruction successful. Nor is planning likely to succeed with a single coordinator of English; few persons have enough charisma to achieve leadership satisfying to a majority of elementary and secondary language teachers. The best solution for Berkeley would be a summer workshop for teachers who wished to earn additional salary; however, the selection of these teachers would need to be handled with delicacy and skill. Weak teachers desiring extra income would not elicit the support of their colleagues. Departmental chairpersons -- at least two from the secondary levels -- and elementary teachers respected by their fellow teachers would constitute the ideal committee.

2) Secondly, the secondary English teachers should make an in depth analysis and evaluation of their current programs. To do this they should use two aids:

...CRITERIA FOR EVALUATING HIGH SCHOOL ENGLISH PROGRAMS, English Journal, December, 1968

...A CHECK LIST FOR EVALUATING THE ENGLISH PROGRAM IN THE JUNIOR AND SENIOR HIGH SCHOOL

Both these documents are available from the National Council of Teachers of English. If they are out of print, the Council will xerox them upon request. Devised by more than 200 teachers and English department chairmen from all over the United States, these documents are helpful. They do not establish national standards nor stifle teachers' individuality and initiative. They do point out that decisions as to what should follow evaluation of an English program must be made by the teachers and administrators involved in the program.

3) Thirdly, the English teachers should clarify the distinction between grammar and usage and should work out strategies for teaching usage through the oral mode: the use of tapes, oral modeling, oral practice related to functional speech purposes such as group discussion.*

4) Fourthly, a unified plan should be promulgated for instruction that will give social class dialect speakers the option of using Standard English in addition to their own dialect.

5) Fifth, the use of drama and all literature to contribute to social sensitivity needs to be reinforced and explicitly planned in the interests of educations' purpose to influence human relationships and social sensitivity. This is a problem of emphasis, not an either-or choice. Attention to the form of literature

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* We recommend reading: "Grammar and the Sentence" Chapter V in TEACHING THE UNIVERSE OF DISCOURSE by James Mofett published by Houghton Mifflin, Palo Alto 1968 & "Why Teach Grammar?" Chapter VI in THE DISAPPEARING DAIS by Frank Whitehead published by the National Council of Teachers of English, 1111 Kenyon Road, Urbana, Illinois 61801

has a legitimate place in its study. When properly taught, appreciation of form can enable an adolescent to perceive better the total value of a literary selection. However, the significance of literature as a record of human experience should receive the primary emphasis with pupils who are not scholors of literature. English teachers are already using literature in this way in Berkeley, but they should increase their use of good film, turn their attention to quality in television presentations, and increase their cooperation on planning human relations emphases. There are dangers in such an approach, but dangers of some kind attend almost all significant English instruction. The only escape from them is a curriculum so safe that it is likewise innocuous.

6) Lastly, plans for increasing the individualization of English instruction need to be devised and put into practice. This will take time and ingenuity, for providing individualized lessons and evaluation is an unrealistic mandate for busy teachers. If it were easy to do so, American education would long ago have taken on a different appearance, for everyone recognizes the value of the flexibility which makes possible

full class experiences, group work, and individual study -- all three are necessary to an ideal education. Some commercial plans for individualizing English are now on the market; they need to be tried out by superior English teachers and evaluated by them for the entire staff.

- Content - Elementary Mathematics Curriculum - Results and Discussion -- The mathematics program in the Berkeley elementary schools, Kindergarten to Sixth grades, may be examined in terms of several questions about curriculum content and instructional practices. In the teacher survey for this study, elementary mathematics teachers* responded to seven such questions. From data concerning emphasis on various areas in the Kindergarten to Sixth Grades mathematics skills sequence, use of mathematics materials and daily instructional time, the curriculum contents will be described. Information on teaching approaches, the nature and degree of stress on computation, the abstractness of mathematics learning tasks, and the number of times per week homework is required will be used in discussing elementary mathematics instruction. Trends in the grades, Kindergarten to Sixth or Kindergarten to Third versus Fourth to Sixth grade, comparison of treatment of above, at, and below grade level pupils, and comparison of ESP and Non-ESP schools are the variables on which these descriptions will be based. The main concerns are the strengths and weaknesses of the elementary mathematics program in terms of its comprehensiveness, design for optimum achievement, sequencing of content, and specific curriculum strategies.

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* The number of teachers in the sample is 26 in Kindergarten, 17 in First grade, 18 in Second grade, 21 in Third grade, 25 in Fourth grade, 21 in Fifth grade, and 24 in Sixth grade. Several combination class teachers are in the sample. Including them, there are 133 K-3 teachers and 77 4-6 teachers. There were 44 teachers from ESP schools and 166 teachers from non-ESP schools. Not all teachers in the sample responded or provided valid responses to all items, so the sample sizes for the various items in the mathematics portion of the teacher survey may deviate slightly from these values.

In the reading and language arts section of this report, reservations were expressed about the validity of the assumption that teachers' responses to the survey questions represent their actual classroom practice. These reservations apply equally to the mathematics portion of the survey.

● ● Skills Sequence -- Teachers were asked to indicate the degree of emphasis (strong, moderate, or none) which they placed on 13 different skill areas with their above, at and below grade level pupils. In the analysis, the percentage of teachers indicating strong emphasis, as opposed to moderate or no emphasis, will be used as the unit of comparison. * The skill areas, sometimes referred to as "strands" by mathematics teachers, are listed in Table 70, which is a tabulation of most of the results to be discussed in this section. Some of the labels for the skill areas bear interpretation. For instance, math readiness, Counting, refers to basic number concepts and counting, words and concepts for shapes, and basic language for discussing and understanding mathematics; e.g., relational terms, such as "right", "left", "above",

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*In the analysis of the reading/language arts survey results, the percentage of teachers indicating strong or moderate emphasis served as the unit of comparison. In the mathematics survey, the skill areas are much broader than the many specific ones in the reading/language arts survey. Most teachers are willing to indicate moderate emphasis of a skill area, if it is sufficiently broad, although they might indicate no emphasis or strong emphasis on many of the more specific skills within the skill area and they differ significantly from colleagues also indicating moderate emphasis. More informative distinctions can be made among teachers when strong emphasis is used as the criterion for emphasis of broad skill areas.

Table 70. Percentages of K-6 Teachers Strongly Emphasizing Mathematics Skill Areas with Above, At, and Below Grade Level Pupils

	K			1			2			3			4			5			6		
SKILL AREA	Above	At	Below	Above	At	Below	Above	At	Below	Above	At	Below	Above	At	Below	Above	At	Below	Above	At	Below
Math Readiness, Counting	69	89	100	59	59	82	18	18	78	10	21	70	5	0	43	5	5	52	8	9	42
Addition, Subtraction with Whole Numbers	72	46	29	94	94	94	83	83	89	64	85	100	36	58	100	24	29	91	17	22	63
Multiplication, Division with Whole Numbers	13	4	4	63	40	13	56	33	12	95	76	33	100	96	75	62	76	91	39	50	92
Fraction Concept	22	22	17	31	20	14	44	22	22	76	60	35	91	52	38	86	76	62	72	75	72
Operations with Fractions	4	4	4	13	0	0	19	6	13	40	16	11	74	40	22	91	81	52	88	83	72
Decimals and Percents	0	0	0	7	0	0	6	0	6	5	6	6	42	20	10	91	48	35	96	79	63
Estimation	20	16	16	38	25	25	28	22	28	29	30	25	48	33	24	76	52	29	58	35	26
Functions and Graphing	4	4	4	20	7	7	11	11	17	29	25	20	46	35	22	67	43	29	63	52	30
Practical Applications	63	58	52	73	53	53	65	59	53	59	59	64	52	55	59	80	75	65	68	67	68
Problem Solving	62	58	44	75	50	44	61	61	61	73	68	59	87	71	64	82	82	73	84	79	76
Vocabulary	70	69	58	63	56	44	50	67	61	48	43	48	57	59	46	64	59	41	56	46	48
Geometry	52	52	52	20	7	0	0	0	0	29	14	14	48	23	23	50	27	14	60	42	24
Measurement	19	16	16	31	12	0	39	39	39	46	41	41	57	32	29	64	55	50	64	63	60

"near", "in", etc. Of course "readiness" is a term which may be seen as applying to the introduction of basic notions at higher levels in the curriculum, and some intermediate teachers may have so interpreted it. Fraction Concept and Operations with Fractions differ in that the former is concerned with the basic fraction notion and the concept of equivalent fractions, whereas the latter is concerned with computation. Estimation refers to the prediction of magnitudes, whether pure numbers as in computation, or measured values. The ability to estimate well is an indicator of a sound understanding of the number system. Functions and Graphing refers to the establishing and understanding of patterns, usually number patterns, and the visual display of information. In appropriate forms, those topics may be profitably pursued with children of any grade level and are important preparation for secondary mathematics. Practical Applications refers to "work problems" in the minds of many, but any problem may be a work problem if it is presented in ordinary prose. A better way to interpret Practical Applications is in terms of the uses of mathematical models to solve problems arising in practical situations. This ambiguity concerning the meaning of Practical Applications must be remembered in interpreting the data, although it should also be noted that the word problems usually encountered in the elementary mathematics curriculum are about practical applications in mathematics. Problem Solving is a skill area devoted to solving non-routine problems requiring some degree of thinking beyond that required by problems for which the method of solution is already well-known to the learner. Some teachers may view Problem Solving as also including mechanical problem solving, a possibility which must be borne in mind in interpreting the data. Geometry is now a part of the elementary mathematics curriculum at all grade levels, but only its basic concepts and intuitive notions appear, and not the formal systems of deduction traditionally associated with high school geometry.

Table 71, which compares the percentage of teachers strongly emphasizing the various skill areas in ESP schools with the percentage in Non-ESP schools, will also be used in the following description. The separate skill areas are first considered, one at a time.

1) Math Readiness, Counting. This skill area is strongly emphasized in Kindergarten and First grades by a majority of teachers, but the emphasis continues through the primary years for the below grade level pupils only. In the intermediate grades, approximately half the teachers maintain strong emphasis in Math Readiness, Counting for such pupils,

Table 71. Percentages of ESP and Non-ESP Teachers Strongly Emphasizing Mathematics Skill Areas with Above, At, and Below Grade Level Pupils

Skill Area	ESP			NON-ESP		
	Above	At	Below	Above	At	Below
Math Readiness, Counting	30	41	88	26	32	69
Addition, Subtraction, with Whole Numbers	74	73	85	57	63	82
Multiplication, Division, with Whole Numbers	55	39	26	64	57	49
Fraction Concept	46	33	15	61	48	38
Operations with Fractions	22	16	3	50	34	24
Decimals and Percents	17	9	6	37	23	17
Estimation	43	34	32	42	32	25
Functions and Graphing	27	15	15	39	28	21
Practical Applications	69	65	64	68	64	62
Problem Solving	74	67	67	74	68	59
Vocabulary	48	47	47	58	56	47
Geometry	27	24	17	43	27	22
Measurement	46	40	35	48	41	37

although they surely do not have quite the same content in mind as the Kindergarten and First grade teachers. The differences in the number of teachers strongly emphasizing this skill area for pupils above, at, and below grade level are statistically significant at the 5 % level in Kindergarten and at the 1 % level in grades First through Sixth.[*] The ESP and Non-ESP schools do not seem to differ in the degree of emphasis of Math Readiness, Counting

2) Addition, Subtraction with Whole Numbers. In Kindergarten, far more teachers strongly emphasize this skill area for above grade level pupils than for the others ($p<.01$). In grades First and Second, almost all teachers strongly emphasize addition and subtraction with whole numbers with all types of pupils. In grade Three, the prevalence in the district of strong emphasis begins to drop, except for below grade level pupils ($p<.05$). In grades Four through Six, it is essentially only the below grade level pupils who continue to receive this emphasis ($p<.01$). In the ESP schools, slightly more teachers emphasize this skill area with the more advanced pupils.

It should be noted that the present method of analysis has the limitation that differences in the number of teachers emphasizing a skill area for various groups of pupils do not directly translate into differences in classrooms. This is essentially the classical problem of looking at behavioral measures summed over a group of persons rather than at the separate behaviors of several individuals. Individual differences become obscured for the sake of average tendencies. For example, if 50% of the teachers strongly emphasize a skill for above grade level pupils and 50% emphasize it for below grade level pupils it may still be the case that no two teachers in the district provide the same degree of emphasis for both above and below grade level pupils. Such unpleasant possibilities (from the vantage point of data interpretation) are much smaller when the two percentages differ sharply or either or both are very high or very low, and the strength of a presumption of widespread actual classroom differences is correspondingly higher. Alternately stated, when the percentages differ greatly, a large number of individual classrooms probably reflect this difference in terms of the treatment of different groups of pupils. However, when the percentages do not differ much, similar treatment of groups in individual classrooms may well be usual, but the alternative of widespread differences in classrooms which cancel out districtwide, may not be excluded *a priori* At best the alternative is perhaps less likely, as may be especially clear in particular cases.

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[*] By means of Chi Square and F-tests, differences in the curriculum and instruction for above, at, and below grade level pupils have been tested for statistical significance. A differ[illegible] statistically significant at the 5% or 1% level will be denoted "$p<.05$" or "$p<.01$", respectively.

In the present interpretation of the data, the above cautionary note will not be repeatedly stressed. Summaries of the results, when compactly stated, may appear to presume differences within classrooms, but the limitations just described are intended to apply.

Addition and subtraction with whole numbers, in summary, is strongly emphasized in grades One through Three. Thereafter, the emphasis is maintained for below grade level pupils only.

3) Multiplication, Division with Whole Numbers. Above grade level pupils receive widespread emphasis in this area even in grades One and Two ($p < .05$ and $p < .01$, respectively). In grade Three, it is also widespread for at grade level pupils ($p < .01$). In grade Four, the emphasis is at its peak for above and at grade level pupils, and it is only somewhat less ($p < .01$) for below grade level pupils. No statistical difference among groups appears in grade Five, where emphasis is on the rise for below grade level pupils and starting to fall off for the others. By grade Six, this skill area is most widely emphasized for below grade level pupils and far less widely emphasized for the others ($p < .01$).

In the ESP schools, the pattern of emphasis for different groups of pupils is fairly similar to the pattern in Non-ESP schools, on an overall basis not differentiating among grade levels. However, the proportion of teachers strongly emphasizing multiplication and division of whole numbers appear somewhat smaller in the ESP schools.

At this point another limitation in the interpretation of these results requires mentioning. Differences between two groups in the proportion of teachers strongly emphasizing a skill area, as based on estimates by individual teachers of their degree of emphasis, may be due to differing interpretations of the meaning of "strong emphasis", "moderate emphasis", and "no emphasis", rather than to differences in classroom practice. Accordingly, the just-mentioned difference between ESP and Non-ESP teachers must be interpreted with caution.

4) Fraction Concept. From Third grade on, strong emphasis in widespread for the more advanced pupils ($p < .01$ for grades Three and Four). In fact, the increase in extent of emphasis from grades Two to Three is quite sizeable. Only the Fifth and Sixth grades do the less advanced pupils receive corresponding emphasis of the fraction concept. In the ESP schools, the proportions of teachers stressing the fraction concept with the different groups of pupils are markedly smaller than in the other schools.

5) Operation with Fractions. This skill area is strongly emphasized by only a small number of teachers before grade Three, but in grade Three, nearly half the teachers strongly emphasize it with their above grade level pupils ($p < .01$). In grade Four, the

proportion of teachers strongly emphasizing operations with fraction is up to 40% for at grade level pupils ($p < .01$); and in grade Three, nearly all teachers strongly emphasize it, except with below grade level pupils ($p < .05$). In grade Six, the extent of emphasis is very high for all three groups of pupils. In the ESP schools, strong emphasis on operations with fraction is much less frequent.

6) Decimals and Percents. Many teachers appear to focus on this skill area with their more advanced Fourth grade pupils ($p < .05$), and many more stress it with all pupils in grade Five, almost all teachers with their above grade level pupils ($p < .01$). Although in grade Six, 63% of the teachers strongly emphasize decimals and percents with their below grade level pupils, this proportion is still significantly less than the proportions for the other groups of pupils ($p < .05$). As with fractions, much less stress on this skill area is found among the ESP teachers.

7) Estimation. Only in grade Five, do teachers significantly differ in their emphasis of this skill area with various groups of pupils ($p < .05$), since 76% of the teachers emphasized it with above grade level pupils. More intermediate teachers stress it than primary, and advanced pupils receive emphasis more often than pupils who are below grade level; but the proportions of teachers focusing on estimation is rarely above 50 % in any grade with any category of pupils. Thus, various types of estima-

tion receive a moderate extent of emphasis in the district, and at no point in the grades does it change drastically. The pattern of emphasis is about the same among ESP and Non-ESP teachers.

8) Functions and Graphing. Only a small number of teachers report strongly emphasizing this skill area in grades Kindergarten to Second. The proportion grows as the grades increase, but much more sharply for the above grade level pupils ($p < .05$ in grades Four and Five). At no grade level is the extent of emphasis close to being universal, but it is fairly high in the Fifth and Sixth grades. Strong emphasis on Functions and Graphing is slightly less frequent among the ESP teachers.

9) Practical Applications. Roughly half to three-quarters of the teachers report strongly emphasizing practical applications of mathematics in all grades. There is little difference when above, at, and below grade level pupils are compared, although before Third grade, somewhat more teachers stress it with above grade level pupils. Approximately the same proportion of ESP teachers as Non-ESP teachers, report strongly emphasizing this skill area.

10) Problem Solving. The pattern of emphasis on this skill area across grades, types of pupils, and ESP and Non-ESP teachers, is quite similar to that for Practical Applications skill area.

11) Vocabulary. In Kindergarten, most teachers report strongly emphasizing Vocabulary. Thereafter, about half appear to stress it, and there are no significant differences for various types of pupils. A slightly smaller proportion of ESP teachers report strong emphasis in this skill area.

12) Geometry. The pattern of emphasis through the grades is the most unique in the case of Geometry. About half the Kindergarten teachers report strong emphasis for each type of pupil. The proportion would be three-quarters if teachers reporting moderate emphasis were also included. After that until grade Four, very few teachers indicate stress laid on Geometry; the figures in the Second grade being quite striking. More teachers are focusing on Geometry in grades Four to Six, especially with above grade level pupils ($p < .01$ in grades Four and Five). Since the percentages for Geometry are quite low, the effect of using "moderate emphasis" or "strong emphasis" as a criterion require mentioning. From Third grade on, the percentages are about 90% for at and above grade level pupils, and about 60-75% for below grade level pupils. The ESP teachers indicate a similar pattern of emphasis except that the ESP teachers do not indicate any greater extent of emphasis with above grade level pupils as do the Non-ESP teachers.

13) Measurement. In the First and Fourth grades, significantly more teachers report strong emphasis with above grade level pupils than with the others ($p < .05$). The percentages are in a 30-40% range in grades Two through Four and around 60% in grades Five and Six. They are quite low in Kindergarten and First grade. If the teachers reporting moderate emphasis are included also, the percentages are around 75 % in Kindergarten and in the 85-100 % range in all other grades. The pattern of emphasis among ESP teachers is quite similar.

The first six skill areas discussed above fall under the broad category of computation. A clear conclusion based on the results just described is that computational skills receive strong emphasis with many more teachers than most of the other skills. Also, Practical Applications and Problem Solving are stressed very frequently, but these strands are probably fuzzy categories to many, and various teachers may interpret them quite differently. The fact that Measurement, a practical application of mathematics par excellence, is stressed by fewer than those stressing Practical Applications, reinforces the possibility that teachers tend to equate Practical Applications with "word problems". Since most of the teachers not strongly emphasizing Measurement and Geometry report that they emphasize them moderately, these subjects are clearly not ignored in the curriculum. The data suggest merely that they receive considerably less emphasis than computation. However, the percentages of teachers strongly emphasizing these areas in Kindergarten to First grades (Measurement) and First to Third grades (Geometry) are really very low. Since Geometry is not included in CDA Math (Wirtz materials), which is widely used in grades One through Three, it is understandable that the Geometry percentages are low. The district may wish to provide teachers in these grades with supplementary materials which cover Geometry. The percentages for Measurement are perhaps low in Kindergarten and First grades, because there may be a tendency to equate measuring with the use of tools too complicated for young children, such as rulers or measuring cups. There are more fundamental approaches to measuring than standardized measurements, and these would be very valuable in the early development of measurement skills and concepts.

A fairly large proportion of teachers appear to be stressing Vocabulary at all levels for all pupils. Since mathematical skills cannot develop very much in the absence of appropriate language, it is important that this area not be ignored by those who do not report strongly emphasizing it.

Estimation does not receive widespread strong emphasis. In view of its value in fostering skill and understanding in computation, an area of clear concern to the teachers, the district may wish to provide teaching and learning materials to support more teachers in increasing their emphasis on Estimation.

Functions and Graphing are infrequently emphasized in the primary grades. In view of the fact that activities in this area can reinforce computational skills and that Functions and Graphing have grown considerably in importance in modern life, pupils should probably be introduced earlier to appropriate material. The many intermediate teachers not strongly emphasizing this skill area may need to increase the amount of emphasis they do place.

A crude picture of the progressing emphasis on computational skills through the district, one not strictly applying to the above and below grade level pupils, is that Math Readiness, Counting, is stressed in Kindergarten; Addition, Subtraction with Whole Numbers is stressed in grades One to Three; Multiplication, Division with Whole numbers is stressed in grades Three to Five; Fraction Concept and Operations with Fractions are stressed in grades Five and Six; and Decimals and Percents are stressed in grade Six. Actually, a sizeable number of teachers appear to stress Fraction Concept in the earlier grades, even in Kindergarten. This state of affairs is a desirable one, since the transition to Operations with Fractions in the later grades is correspondingly less abrupt and confusing to the pupil. Those teachers not emphasizing Fraction Concept in earlier grades probably should do so.

When the progress of an above grade level pupil through the grades, is compared with that of a below grade level pupil on the basis of inferences from the foregoing results, the aspects of a serious problem in the district become evident. The above grade level pupil is introduced to new computational skills much more quickly, and the below grade level pupil continues to labor over the ones introduced in previous years. The above grade level pupil seems to have more time for materials in other areas, such as Functions and Graphing, Geometry, and Estimation. Both pupils appear to receive about equal emphasis on Practical Applications and Problem Solving, but nevertheless, the below grade level pupil falls further and further behind.

This idealized description suggests on the one hand that individualizing of instruction is occurring, a positive feature of the curriculum. On the other hand, the pupil who is behind may be in a rut, focusing too much on the same old computational material. This focusing often amounts to drudgery, and when it occurs to the exclusion of the topics which the better pupils are covering, the below grade level pupil may be trapped in that condition. It may help such pupils to involve them regularly with more advanced computation and activities in their low emphasis areas -- Estimation, Functions and Graphing, and Geometry, provided, of course, that it is done so that failure is not experienced. When such topics are included, mathematics is more stimulating. Computational skill need not suffer, since these subjects are easily integrated with computation.

The serious problem for the district is the plight of pupils who steadily fall behind in mathematics. The magnitude of the deficiency is reflected in the fact that nearly half the Fifth and Sixth grade teachers say they strongly emphasize Math Readiness, Counting, with below grade level pupils. Junior high school teachers indicate concern over the elementary school preparation in mathematics of their below grade level students. The idealized profiles of above and below grade level pupils just outlined, point out the divergence in achievement which exists. It is not possible to do away with below grade level pupils, but their mathematics experiences may be selected in alternate ways. The suggestion of the preceding paragraph for a broadening of experience might be a way of keeping the lagging pupil at least more stimulated and in contention to progress further in secondary mathematics than he or she would be otherwise.

The comparison of ESP and Non-ESP teachers shows that ESP teachers much less frequently report strongly emphasizing the more advanced computational skill areas. However, these differences are due to the fact that a much larger proportion of the ESP teachers in this study are primary teachers than is the case for the Non-ESP teachers, since multiplication, division, fraction, decimals, and percents are covered mostly in grades Four to Six. Presumably, there are no major differences between ESP and Non-ESP teachers in the patterns of emphasis on the elementary mathematics skill areas.

● ● *Materials* -- The question on which the results concerning instructional materials are based, asked teachers to indicate the percentage of mathematics instruction for which they use various materials, the total of the percentages listed ~~being~~ required to equal 100 %. They were requested to make separate estimates for their pupils above, at, and below grade level. The list of materials with which they were supplied in this question is a fairly comprehensive listing of the possibilities available to an elementary mathematics teacher in the district.

Table 72 shows the mean percentages for each type of material and each type of pupil for teaching in grades Kindergarten to Third and Fourth to Sixth. Table 73 shows the corresponding mean percentages for

Table 72. Mean Percentages of Mathematics Instructional Time Allocated to the Use of Various Materials by Teachers in Grades K-3 and 4-6 for Above, At, and Below Grade Level Pupils

Materials	K-3 Above	K-3 At	K-3 Below	4-6 Above	4-6 At	4-6 Below
Wirtz Materials (CDA Math)	33	22	27	10	9	7
Houghton-Mifflin Text (Mod. School Math)	7	8	7	24	22	13
Addison-Wesley Text (Elem. School Math)	3	4	3	4	4	4
Franklin Materials	1	1	1	1	1	1
Individualized Program	5	4	4	7	7	10
Computation Practice Kits	1	1	1	1	2	2
Math Lab Manipulatives	7	8	10	3	3	3
Commercial Worksheets	4	4	3	9	9	9
Teacher-made Worksheets	13	12	13	22	23	29
Physical Number Aids	3	3	5	1	1	3
Commercial Drill and Practice Games	5	5	4	3	4	4
Tapes, Film Loops, etc.	1	1	1	1	1	2
Mathematics Library Books	1	1	0	1	0	0
Other Materials	5	5	6	5	4	3

Table 73. Mean Percentages of Mathematics Instructional Time Allocated to the Use of Various Materials by Teachers in ESP and Non-ESP Schools for Above, At, and Below Grade Level Pupils

Materials	ESP			NON-ESP		
	Above	At	Below	Above	At	Below
Wirtz Materials (CDA Math)	18	18	14	26	25	21
Houghton-Mifflin Text (Mod. School Math)	7	8	4	15	15	10
Addison-Wesley Text (Elem. School Math)	11	13	11	2	2	2
Franklin Materials	0	0	0	1	1	1
Individualized Program	11	9	11	4	4	5
Computation Practice Kits	0	1	1	1	1	2
Math Lab Manipulatives	8	9	10	5	6	7
Commercial Worksheets	4	4	3	6	6	5
Teacher-made Worksheets	16	16	16	16	17	18
Physical Number Aids	2	2	3	2	3	5
Commercial Drill and Practice Games	4	3	2	4	5	4
Teacher-made Drill and Practice Games	9	9	10	10	10	13
Tapes, Film Loops, etc.	1	0	0	1	1	1
Mathematics Library Books	1	0	0	1	0	0
Other Materials	7	7	8	5	4	4

ESP and Non-ESP teachers. As in the section concerning the mathematics skill sequence, results of statistical tests of significant differences in means for above, at, and below grade level pupils will be provided.

For both grades Kindergarten to Third, and grades Fourth to Sixth, materials with mean percentages in the following three ranges will be listed: 16 to 33%, 7 to 15%, and 3 to 6%. Other materials will not be listed. The choice of these ranges is purely in response to observed groupings in the data and is not based on any *a priori* considerations. The materials are listed in order of amount of use.

Grades K-3:

16 to 33 %

Wirtz Materials (CDA Math)

7 to 15 %

Teacher-made Worksheets
Teacher-made Drill and Practice Games
Math Lab Manipulatives
Houghton-Mifflin Textbooks (Modern School Mathematics)

3 to 6 %

Other Materials
Commercial Drill and Practice Games
Individualized Program
Commercial Worksheets
Addison-Wesly Text (Elementary School Mathematics)
Physical Number Aides.

Grades 4-6:

16 to 33 %

Teacher-made Worksheets
Houghton-Mifflin Text (Modern School Mathematics)

7 to 15 %

Wirtz Materials (CDA Math)
Commercial Worksheets
Teacher-made Drill and Practice Games
Individualized Program

3 to 6 %

Other Materials
Addison-Wesley Text (Elementary School Mathematics)
Math Lab Manipulatives
Commercial Drill and Practice Games

The percentages for Wirtz Materials for above, at and below grade level pupils in grades Kindergarten to Third, differ in a somewhat surprising way, but these differences are not statistically significant. It is not clear why at grade level pupils should spend the least time with the Wirtz materials. Below grade level pupils in grades Kindergarten to Third spend somewhat more time with Math Lab Manipulatives, but the difference is not significant. They also spend more time with Physical Number Aides ($p < .05$) and somewhat more time with Teacher-made Drill and Practice Games.

In grades Four to Six, below grade level pupils spend much less time ($p < .01$) with the Houghton-Mifflin Text than do other pupils. Presumably, correspondingly, they spend more time with Teacher-made Worksheets. They also work somewhat more with Physical Number Aides.

The ESP teachers use Wirtz Materials much less than do the others. They report using the Houghton-Mifflin Text less, but this result is certainly largely due to the fact that the ESP teachers in this survey are mostly primary teachers. However, ESP teachers indicate much more frequent use of the Addison-Wesley Text than do Non-ESP teachers. Also they report much more frequent use of an Individualized Program. Their apparent greater use of Math Lab Manipulatives is artificial and is explained by the concentration of primary teachers among the ESP teachers in the present sample. For the same reason, ESP teachers only appear to make slightly less use of Commercial Worksheets. That they report slightly more use of other materials is not so explained.

Briefly put, ESP teachers appear to use Wirtz Materials less than their Non-ESP counterparts and the Addison-Wesly Text and Individualized Programs more.

A concise idealized description would show the primary teacher mainly using Wirtz Materials and Teacher-made Materials (both Worksheets and Drill and Practice Games). The intermediate teacher would be seen using Teacher-made Worksheets and the Houghton-Mifflin Text. Moreover, the below grade level pupils would be spending more time with the former and less with the latter than their classmates. Of course, many other materials appear to be used part of the time. It must be remembered that the percentages are averages, so that the distribution of times spent by individual teachers on various materials with various types of pupils could be quite different from the mean percentages, provided opposite tendencies cancelled each other. In fact, the rather low percentages in nearly all categories implies either that teachers do differ widely in their time allocations with these materials and opposing tendencies do cancel, or else classrooms are rather similar and each one uses a large variety of the types of materials listed (in order to total 100 %). The former alternative seems more likely.

That there is a large variety of materials in use in the district and that teachers differ in their time allocations with each, is a program strength if it is a sign of flexibility and adaptability whereby individual teachers, or at least schools are able to select among options the materials most suitable for their children. It can be a program weakness, if it means too many changes of types of instructional materials as children advance through the grades.

In the primary grades, the Wirtz Materials, which have the highest usage, are individualized materials and they cover computational and problem solving skills quite well. The mathematics programs might be strengthened if materials were obtained specifically to teach geometry and measurement skills.

In the intermediate grades, the Houghton-Mifflin Text is probably unsuitable for below grade level pupils, who in fact spend less time with it. That they appear to spend more time instead with Teacher-made Worksheets suggests that in many cases they may be without a well-organized mathematics program. It is recommended that mathematics materials purchased under the new adoption, take into account possible needs in grades Four to Six for instructional materials intended to provide below grade level pupils with a well organized mathematics program.

The small amount of time allocated to work with Math Lab Manipulatives is a program weakness from a particular point of view; the point of view that young children need much experience with concrete materials, in order to learn mathematics with understanding. There are other points of view, but consideration should be given towards increasing the classroom availability of mathematics manipulatives and providing teachers with the opportunity to learn to use them effectively. This recommendation applies not only to the primary, but also to the intermediate grades, where very little time is allocated to Math Lab Manipulatives.

• • Mathematics Time Per Day -- Teachers were asked to indicate the amount of daily mathematics instruction time they provide for their above, at, and below grade level pupils. The results are summarized in Tables 74 and 75.

The mean time per day climbs steadily from Kindergarten to grade Four. In grade Five it drops back to 51 minutes (almost the first grade level) and then jumps back up to 59 minutes in grade Six. Above grade level pupils spend slightly more time with mathematics each day. ESP teachers appear to devote slightly more time to mathematics instruction, but the difference is probably insignificant.

All the mean times appear quite reasonable, although it should be ascertained with greater certainty if Fifth grade teachers on the average spend much less daily time on mathematics instruction. If they do, it would be important to know why.

Teachers spending much less daily time on mathematics instruction than the relevant mean times of this survey are probably not devoting enough instructional time to mathematics. Those spending much more time could be neglecting other school subjects.

The preceding three sections were devoted to basic mathematics curriculum components in the district. The next four are concerned with certain important aspects of mathematics instruction.

Table 74. Mean Daily Instructional Times in Mathematics of Teachers in Grades K-6 for Above, At, and Below Grade Level Pupils

	K	1	2	3	4	5	6
Above	39	49	53	55	55	49	57
At	39	50	55	57	57	51	59
Below	39	53	60	61	61	55	61

Table 75. Mean Daily Instructional Times in Mathematics of ESP and Non-ESP Teachers in Grades K-3 and 4-6 for Above, At, and Below Grade Level Pupils

	ESP		NON-ESP	
	K-3	4-6	K-3	4-6
Above	50	56	48	54
At	51	57	50	56
Below	53	61	53	59

Kindergarten to Six Grade Mathematics Instruction -- It is difficult to characterize elementary mathematics instruction throughout a district by means of a small number of survey questions, but four issues were selected as being of importance: the types of teaching approaches emphasized, the amount of computation instructional time and its nature, the varying abstractness of mathematics learning tasks, and the number of times per week mathematics homework is required. A description of the results follows.

1) Teaching Approaches. The response categories for the survey question about teaching approaches are:

(a) Verbal explanation and demonstration to the whole class of pages in the math book

(b) Other verbal explanation and demonstration of math skills and understanding to the whole class

(c) Discovery through independent investigations by pupils individually or in small groups (teacher a resource)

(d) Guided discovery by teacher questioning strategies

(e) Individual learning with "test" or individualized materials (teacher a resource)

(f) Behavior modification strategies employing systematic reinforcement of correct mathematical behaviors

(g) Imitation

(h) Classroom discussion of mathematics

Teachers were asked to indicate whether they placed strong, moderate or no emphasis on each approach. In this case, they were not asked to distinguish among different types of pupils. The percentages of teachers in elementary grades indicating strong emphasis are presented in Table 76 and similar percentages for ESP and non-ESP teachers are presented in Table 77.

The grades in which certain teaching approaches were strongly emphasized by more than 50 % of the teachers are:

Grade	
5	Other verbal explanation
K,1,3	Discovery through independent investigation
K,1,2,3,5	Guided discovery
K,1,3,4,5,6	Individual learning
5	Classroom discussion

The grades in which certain teaching approaches were strongly emphasized by no more than 15 % of the teachers are:

Grade	
K,1,3	Verbal explanation
1	Other verbal explanation
all	Imitation

Their breakdown may be neatly rearranged by grades in order of frequency of strong emphasis:

Grades K, 1 and 3:

Individual learning (more than 50 %)
Discovery through independent investigation (more than 50%)
Guided discovery (more than 50 %)

Grade 2:

Guided discovery (more than 50 %)
Imitation (no more than 15 %)

Grades 4 and 6:

Individual learning (more than 50 %)
Imitation (no more than 15 %)

Table 76. Percentage of K-6 Teachers Strongly Emphasizing Mathematics Teaching Approaches

Teaching Approach	K	1	2	3	4	5	6
Verbal Explanation and Demonstration to the Whole Class of Pages in the Math Book	15	6	25	10	27	43	35
Other Verbal Explanation and Demonstration of Math Skills and Understanding to the Whole Class	19	13	41	26	39	62	35
Discovery Through Independent Investigations by Pupils Individually or in Small Groups (teacher a resource)	64	81	47	62	39	43	42
Guided Discovery by Teacher Questioning Strategies	52	59	53	81	36	81	48
Individual Learning with "Text" or Individualized Materials (teacher a resource)	54	82	44	71	69	60	54
Behavior Modification Strategies Employing Systematic Reinforcement of Correct Mathematical Behaviors	26	17	18	32	33	47	21
Imitation	14	13	8	0	10	11	10
Classroom Discussion of Mathematics	35	21	20	16	31	60	38
Other	100	50	75	67	0	33	75

Table 77. Percentage of ESP and Non-ESP Teachers Strongly Emphasizing Mathematics Teaching Approaches

Teaching Approach	ESP	NON-ESP
Verbal Explanation and Demonstration to the Whole Class of Pages in the Math Book	8	22
Other Verbal Explanation and Demonstration of Math Skills and Understanding to the Whole Class	24	31
Discovery Through Independent Investigations by Pupils Individually or in Small Groups (teacher a resource)	47	56
Guided Discovery by Teacher Questioning Strategies	55	58
Individual Learning with "Text" or Individualized Materials (teacher a resource)	65	61
Behavior Modification Strategies Employing Systematic Reinforcement of Correct Mathematical Behaviors	27	27
Imitation	11	7
Classroom Discussion of Mathematics	26	32
Other	83	61

Grade 5:

Guided discovery (more than 50 %)
Other verbal explanation (more than 50 %)
Individual learning (more than 50 %)
Classroom discussion (more than 50 %)
Imitation (no more than 15 %)

It would appear that Second grade stands somewhat apart from grades Kindergarten, First, and Third, and Fifth grade stands apart from Fourth and Sixth, when these teaching approach criteria are applied, although there is no apparent reason why it should be so. A feature common to the Second and Fifth grade results distinguishing them from the other grades would seem to be the use of teacher talk in teaching approaches. This distinction is more pronounced in the case of the Fifth grade. Whether this conclusion is merely an artifact of the sampling or the reliability of the rating scale in this survey, or whether it corresponds to reality can only be answered by further investigation.

Individual learning is the teaching approach receiving the most widespread strong emphasis by the teachers. In the primary grades, discovery approaches, both teacher guided and independent, are also prevalent. Verbal explanation approaches and classroom discussion are used more in intermediate grades than primary, but only in the Fifth grade with high frequency. Behavior modification strategies seem to be in moderate use. Imitation is the teaching approach used least frequently. Since a large number of teachers indicated that they strongly emphasized other teaching approaches than the present ones, the foregoing description of the teaching approaches employed in elementary mathematics instruction may be incomplete.

The differences between ESP and Non-ESP teachers in their use of the teaching approaches do not appear major, although ESP teachers report stressing verbal explanation approaches somewhat less.

2) Computation Time --Teachers were asked to indicate the percentage of mathematics class time spent by their above, at, and below grade level pupils on:

(a) Computation drill
(b) Understanding the structure of computation
(c) Non-computation time.

The percentages were required to total 100 %. The results for teachers in Kindergarten to Third and Fourth to Sixth grades for ESP and Non-ESP teachers are presented in Tables 78 and 79, respectively.

The importance of computation ability is undisputed, but the relative value of time spent teaching computational techniques through "drill and practice" and time spent on understanding reasons for computational procedures is perhaps a controversial matter. Emphasis on the latter is a characteristic of "new math", a nationwide curriculum reform movement which influenced the mathematics textbook series chosen in the last two California adoptions. The survey

Table 78. Mean Percentage Times Devoted to Computation Tasks by Above, At, and Below Grade Level Pupils of Teachers in Grades K-3 and 4-6

Computation Task	K-3			4-6		
	Above	At	Below	Above	At	Below
Computation Drill	33	34	32	38	42	46
Understanding the Structure of Computation	34	33	33	32	31	31
Non-Computation Time	32	33	35	29	26	22

Table 79. Mean Percentage Times Devoted to Computation Tasks by Above, At, and Below Grade Level Pupils of Teachers in ESP and Non-ESP Schools

Computation Task	ESP			[illegible]		
	Above	At	Below	Abov	[illegible]	Below
Computation Drill	35	36	37	35	37	37
Understanding the Structure of Computation	31	28	28	34	34	33
Non-Computation Time	32	33	32	31	30	30

responses may reflect the practical position taken by the teachers in the district on this issue.

About two-thirds of mathematics time is devoted to computation in grades Kindergarten to Third, and nearly three-quarters in grades Fourth to Sixth. In grades Kindergarten to Third, different types of children spend approximately the same amount of time on computation, but in grades Four to Six, above grade level pupils devote significantly less time to it, below grade level pupils significantly more (p .05).

If time devoted to computation drill in grades Kindergarten to Third is compared with time devoted to understanding the structure of computation, the times are about equal, and there are no significant differences for different types of pupils. In grades Four to Six, it is another matter. Quite a bit more time is spent on computation drill and the difference is the greatest for below grade level pupils, who spend 46% of their time on computation drill.

ESP teachers do not differ much from their Non-ESP counterparts in terms of computation time, although they devote slightly less time to understanding the structure of computation and slightly more to mathematics other than computation.

The distribution of computation time in the primary grades appears reasonable, and one-third of the mathematics class time is probably sufficient for the other skill areas, such as Functions and Graphing, Geometry, and Measurement (Estimation, Practical Applications, and Problem Solving overlap with computational and non-computational skill areas).

The distribution of time in grades Four to Six sharpens the picture obtained from the results of the Skills Sequence and the Materials portion of this survey. It is a reasonable distribution for above and at grade level pupils, although these pupils could perhaps profit by more time working in non-computational skill areas. Whether it is reasonable for below grade level pupils is a key issue for the Kindergarten to Sixth mathematics program. The results from the section on Materials, suggest that the intermediate below grade level pupils are spending time with teacher-made worksheets instead of with a mathematics textbook or other mathematics program. The present section suggests that these worksheets are primarily computational drills. The Skill Sequence section suggests that the content is at least one or two grade levels below the level at which the other pupils are working.

Necessarily, such a formulation is an over-simplification, but it is useful in defining a problem: should the skill areas emphasized, the materials used and nature of the stress on computation be altered for intermediate below grade level pupils? Elsewhere in this report it can be seen that Seventh grade teachers are dissatisfied with the preparation of many of their incoming pupils, and that fact seems to imply that existing practices should be modified. A possible modification would consist in 1) lessening the time these pupils spend on computational drills in favor of more time devoted to understanding more advanced computation and other skill areas, and 2) increasing the time spent with commercial materials appropriate for below grade level pupils, materials which cover the desired skill areas in a well-organized way. The second part of this modification requires that the district make such materials available to the teachers. Also, a solution to the problem just posed will only be workable if the intermediate and junior high school teachers are jointly involved in the decisions made.

It should be noted that below grade level pupils do not pop up suddenly in the intermediate grades. It may be that modifications are also called for in the primary program of incipient low achievement However, the present analysis cannot shed light on this issue.

3) Abstractness of Tasks -- Teachers were asked to indicate the percentages of mathematics time spent by their above, at, and below grade level pupils on tasks of varying concreteness or abstractness. The response categories used are:

(a) Tasks focusing on physical materials (e.g., math manipulative materials)
(b) Paper and pencil tasks involving physical materials as an aid
(c) Paper and pencil tasks
(d) Other

The percentages were required to total 100%. The mean percentage times for teachers in grades Kindergarten to Third and Fourth to Sixth and for ESP and Non-ESP teachers are given in Table 80 and 81, respectively.

Elementary mathematics classrooms should involve considerable active learning with physical materials. This belief is based on another--that children before age 12, approximately, understand concepts, relations, processes, and procedures only when they are closely tied to concrete, physical experience. According to this point of view children at such ages are unlikely to be successful at abstract thought. In this survey question, paper and pencil tasks are regarded as more abstract and tasks involving physical materials as more concrete. The results may show the practical position taken by the district's elementary teachers on this issue.

Trends in the data are best seen by concentrating on the first and third response categories. Thus, pupils of Kindergarten to Third teachers spend much more time with tasks focusing on physical materials than pupils of Fourth to SIxth teachers, and the reverse is true for paper and pencil tasks.

Table 80. Mean Percentage Times Devoted by Above, At, and Below Grade Level Pupils Of Teachers in Grades K-3 and 4-6 to Tasks of Varying Abstractness

	K-3			4-6		
Type of Task	Above	At	Below	Above	At	Below
Tasks Focusing on Physical Materials	30	34	44	14	16	22
Paper and Pencil Tasks Involving Physical Materials	33	35	34	22	24	27
Paper and Pencil Tasks	35	28	19	60	57	48
Other	3	3	3	3	3	3

Table 81. Mean Percentage Times Devoted by Above, At, and Below Grade Level Pupils of ESP and Non-ESP Teachers to Tasks of Varying Abstractness

	ESP			NON-ESP		
Type of Task	Above	At	Below	Above	At	Below
Tasks Focusing on Physical Materials	30	32	29	22	26	35
Paper and Pencil Tasks Involving Physical Materials	29	32	32	28	30	31
Paper and Pencil Tasks	37	33	26	46	41	30
Other	3	3	3	3	3	3

In primary grades approximately equal amounts of time are spent on both types of tasks. In intermediate grades, the majority of the time is devoted to paper and pencil tasks.

In both primary and intermediate grades, below grade level pupils spend more time with tasks focusing on physical materials ($p < .01$) and less time with paper and pencil tasks ($p < .01$) than their classmates. The ESP teachers report time allocations not too different from the non-ESP teachers.

These results suggest that the pupils of primary teachers are spending more time with physical materials than the Materials results seemed to imply. Perhaps, intermediate pupils would benefit by more mathematics learning activities involving concrete materials. It seems appropriate that the below grade level pupils are working more with physical materials than their classmates.

4) Mathematics Homework-Times per Week -- Teachers were asked to specify how many times per week mathematics homework is typically required of their above, below, and at grade level pupils. The results for elementary teachers and for Kindergarten to Third and Fourth to Sixth grade teachers in ESP and Non-ESP schools are given in Tables 82 and 83, respectively.

The amount of mathematics homework required of elementary school children is not an active issue among mathematics educators. In fact, it is rarely

Table 82. Mean Number of Times Per Week Mathematics Homework is Required by Teachers in Grades K-6 of their Above, At and Below Grade Level Pupils

	K	1	2	3	4	5	6
Above	.2	1.8	1.7	1.9	3.0	3.5	3.2
At	.0	1.7	1.1	1.2	2.8	3.7	3.0
Below	.0	1.6	.9	1.3	2.6	3.4	2.8

Table 83. Mean Number of Times Per Week Mathematics Homework is Required by ESP and Non-ESP Teachers in Grades K-3 and 4-6 of their Above, At, and Below Grade Level Pupils

	ESP		NON-ESP	
	K-3	4-6	K-3	4-6
Above	.9	3.6	1.3	3.2
At	.6	3.6	1.0	3.1
Below	.5	3.9	1.0	2.9

discussed. Since it is an instructional variable which can be directly manipulated, and since almost daily homework is required in secondary mathematics courses, it is important to know what the trends are in the district's elementary schools.

There is little homework required of Kindergarten children. Most First graders must do homework nearly twice a week. Above grade level pupils continue at this level through grade Three, but at and below grade level pupils do homework about once per week. In grade Four, the average is about 3.0. In grade Five, it is about 3.5, but it drops back to the Fourth grade level in grade Six. A natural question is whether the Fifth grade teachers should require less or the Sixth grade teachers should require more (or neither). Once again in this survey, the Fifth grade appears to stand slightly apart from the Fourth and Sixth grades with respect to mathematics curriculum and instruction.

Below grade level pupils are generally asked to do less homework than the others, but the difference is not significant.

Primary ESP teachers require less homework than primary Non-ESP teachers, but the reverse is true for intermediate teachers. The second part of this statement may not be reliable, since the sample of ESP intermediate teachers is small, but the first part is probably reliable.

The results of the homework section do not seem to suggest any recommendations.

• • Conclusions[*] -- Concerning elementary mathematics curriculum and instruction, various recommendations and suggestions for consideration by the district have been made in the preceding pages. Three of them should be re-emphasized.

1) The greatest weak spot in the elementary mathematics program seems to be in the provisions for Fourth to Sixth grade pupils who perform below grade level. It is recommended that modifications be considered in the skill areas covered by these pupils, in the mathematics learning materials they use and in the extent and nature of time they devote to computation.

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[*] Pacific Consultants places confidence in the conclusions reached in this section. Yet, it is appropriate to remark on an additional perspective on the findings that some mathematics specialists might raise. Each conclusion offered urges programatic changes. Some educators feel that public education has been littered with changes, changes which are sometimes made prematurely and sometimes made for the sake of change per se. According to this viewpoint, once changes such as those suggested are made, they should be subject to numerous additional years of "fine-tuning" rather than being discarded after a two to three year trial should optimum student outcomes fail to materialize in that period of time. Alternatively, before embarking on drastic curriculum change, it could be productive to investigate some of the alternative causes of low achievement. For example, a principal might give a task force of parents and teachers the mission of determining three of four of the major factors contributing to low achievement (e.g. low achievement is a cumulative effect over all school years; only transfer students at higher grades show low achievement; children with certain background characteristics are vulnerable to low achievement; specific curriculum or instructional approaches are likely to produce low achievers.) This process would be important because the nature of these causes would suggest several entirely different remedies.

Possible modifications have been mentioned. It is also recommended that the district allocate resources for instructional materials that intermediate below grade level pupils are seen to need.

2) A second area of concern is the skills sequence. It is recommended that the district consider increasing emphasis on skill areas outside computation, especially Geometry and Measurement, but also Functions and Graphing, and aspects of Practical Applications going beyond traditional "word problems". Appropriate instructional materials may be needed, especially in the primary grades.

3) A third issue is the use of physical materials and emphasis on activity approaches to learning. It is recommended that the district consider increasing the emphasis on these approaches, especially in the intermediate grades. Various mathematics laboratory and other materials may be needed.

- Content - Secondary Mathematics Curriculum-Results and Discussion --

  - Course Offerings -- A wide variety of mathematics courses are available to students in the Berkeley secondary schools. These courses are listed in Table 84. All students are required to take two full years of mathematics at both junior high schools. A Math Skills series which covers elementary computation is intended for students more than one year below grade level. Students who are near grade level take the Math Theory series covering more advanced computation and applications such as area, volume, and geometry. Pre-Algebra at Willard is intended for students at least two years above grade level. Both junior high schools offer Algebra 1, 2 to their advanced Eighth graders, but King Junior High initiated an Advanced Math series for those advanced students who might profit by deferring Algebra 1, 2 to the Ninth grade. Willard offers a Math Lab series for very high ability students covering topics beyond the Seventh and Eighth grade levels. Computer Programming is available to junior high students as an elective over and above the mathematics requirement.

    A student completing the Eighth grade at grade level, should be able to understand and compute with integers and rational numbers and should know enough about irrational numbers to employ them in

Table 84. Course Offerings in Secondary Mathematics

SCHOOL	COURSE
Berkeley High School	
Regular	Math Skills; High Intensity Learning Center; Algebra A, B, C; Algebra Lab; Geometry 1,2; Geometry 1, 2; Geometry 110, 120; Algebra 3, 4; College Prep Math; Trigonometry; Probability; Advanced Topics in Mathematics; Math Analysis 1, 2; Calculus A, B.
Model School A	Math Skills; Algebra A, B, C; Geometry 1, 2; Algebra 3, 4.
Continuation High School (East Campus)	Math; Algebra A, B, C; Geometry; Trigonometry; Computers.
West Campus (Ninth grade)	Basic Math Skills; Pre-Algebra; Algebra A, B, C; Algebra 1, 2; Elementary Geometry, Level 1; Elementary Geometry, Level 2.
Willard Junior High	
Seventh grade	Math Skills; Math Theory; Pre-Algebra; Math Lab; Computer Programming.
Eighth grade	Math Skills; Math Theory; Math Lab; Algebra 1, 2; Computer Programming.
King Junior High	
Seventh grade	Math Skills; Math Theory; Advanced Math; Computer Programming.
Eighth grade	Math Skills; Math Theory; Advanced Math; Algebra 1, 2; Computer Programming.

solving right triangle problems. Objectives in number theory include the ability to write prime factorizations, find least common multiples and greatest common divisors, and apply various simple divisibility rules. In geometry, the basic notions of non-metric geometry and some of the mensuration formulas are required. Other topics important at this level are coordinate planes and graphs, exponents, and simple open sentences, including inequalities. Although the document "Berkeley Unified School Distirct Mathematics Objectives, Grades 7-12" (May, 1972) does not explicitly list practical applications as an objective, the junior high mathematics teachers interviewed for this report made it clear that they do stress practical applications.

Students at West Campus may take a variety of courses, depending on their ability levels. Basic Math Skills is a one-year individualized remedial computation program. Since one full year of mathematics after junior high is required for high school graduation, this math course is usually the last one ever taken by students far below grade level. Pre-Algebra is a one-year course for students intending to take Algebra but requiring further preparation. The abilities of students taking this course fall in a wide range, but they are generally low achievers. Algebra A, B, C is a three semester series roughly equivalent to

Algebra 1, 2, but perhaps more "watered down". Elementary Geometry, Level 1, is a one-year geometry course for top students, and Elementary Geometry, Level 2, is a similar course with a less rigorous textbook. Students are assigned to mathematics classes at West Campus on the basis of their junior high courses and performance, as well as on the basis of teacher recommendations.

At the regular campus of Berkeley High School, there is a Math Skills course for remedial work in arithmetic. There is also a High Intensity Learning Center offering one semester of arithmetic. It may be repeated for credit. Algebra A, B, C is offered as well as an individualized Algebra Lab. Geometry 1, 2 and Geometry 110, 120 are both one-year series, but the former is more traditional, the latter more inductive and intuitive. Algebra 3, 4 is "second year algebra". College Prep Math is a one semester review of algebra and geometry intended to help students pass college entrance examinations. One semester courses are available in Trigonometry, Probability, and Advanced Topics in Mathematics, the latter taking up topics not normally stressed in the high school curriculum, such as mathematical induction, logic and Boolean algebras. Math Analysis 1, 2 is a one-year series covering elementary functions and analytic geometry, respectively. A one-year calculus course is available to the top mathematics students.

The Math Skills, Algebra A, B, C and Algebra Lab classes are open to all students at Berkeley High. Prerequisites for the other classes are, roughly, that the classes below them be completed with a grade of C or better.

The courses listed in Table 56 for Model School A are quite similar to the corresponding ones offered at the regular campus. At Continuation High School classes are completely individualized, and students select their course and the particular materials they wish to use from several alternatives with the advice of the mathematics teachers, as they request it. The materials may be selected at varying levels of difficulty, and students work independently at their own rate.

The top mathematics student is very well served by the district's mathematics program. Such a student might progress through the following secondary program:

Grade	
7	Advanced Math
8	Algebra 1, 2
9	Elementary Geometry, Level 1
10	Algebra 3, 4
11	Math Analysis 1, 2
12	Calculus A, B

If Computer Programming, Trigonometry, Probability and Advanced Topics in Mathematics are also taken, little more could be imagined by way of high school preparation for university work in mathematics.

Low achieving mathematics students are another matter. They constitute the most serious unsolved problem for the district in the curriculum area of mathematics. It has been described elsewhere in this report how the below ability pupils in grades four to six appear to need some significant improvements in their program. The junior high teachers interviewed, reported that these same pupils enter junior high with gross mathematical deficiencies. In fact, mathematics teachers at all secondary levels indicate that students come to them inadequately prepared by their previous courses. There seems to be a ripple effect. Teachers at one level say they cannot cover all the material in their courses, because they must devote time to reviewing prerequisite material. The students they pass on will still be "behind", perhaps even more so. The next teacher is required to make more course modifications, leaving out the more advanced subjects.

The response in the secondary mathematics curriculum to this situation has been the impressive proliferation of courses just described. In each grade, students at various achievement levels are offered courses at their level. As suitable as this response appears, it may fall short of what could be done to help the low achieving students to do better and advance further.

One possible modification is to reduce the amount of ability grouping in junior high. The present three-tier system (remedial group, average group, above average group) is generally seen by the teachers as necessary to cater to the widely differing mathematical backgrounds of the students. However, lower level students may find it too difficult to advance to higher level sections and may become trapped in the remedial group. At the expense perhaps of slightly delaying the acceleration of some students, all or almost all students could be kept together at least during the Seventh grade, with the above average students serving as peer aides rather than taking more advanced classes. The content could come from a basic list drawn up by mathematics teachers at all levels and should include more than computation. Topics from various portions of the State Mathematics Framework should be included, both so that the drudgery of focusing on computation is avoided, and so that prerequisites for more advanced subjects are covered.

Another possible modification is the improvement of the program for the intermediate below grade level pupils, as suggested in the portion of this report concerned with elementary mathematical skills. An aspect of this improvement must include better coordination of intermediate and junior high mathematics instruction. One of the major deficiencies in the district's mathematics program appears to be a great lack of articulation. This deficiency also applies to the junior high - West Campus transition, but is probably most critical in the case of intermediate and junior high school. No central office administrator appears to be specifically accountable for such a problem, or for the district's mathematics program in general. Coordination between and among schools cannot fluorish when it is initiated only by a few teachers or principals to whom it seems to be important (at least one of whom was interviewed for this report). Almost every mathematics teacher interviewed was critical of the lack of central coordination and supervision in mathematics. The data suggest that such a job role having district-wide responsibility for grades Kindergarten to Twelve is necessary.

A related result based upon the interviews is a positive one. Most of the mathematics teachers interviewed reported good coordination and planning going on with their colleagues at their schools. Materials for the secondary mathematics courses consist in the typical case of a textbook, possibly a supplementary book or workbook, and teacher-made worksheets, prepared as needed. To the extent they wish to finance it out of their own pockets, teachers bring in a wide selection of supplementary materials--other textbooks, games, puzzles, a wide variety of enrichment books (reproduced pages are used frequently), electronic calculators (desk or hand-held), and mathematics manipulatives (such as Geobards). Some teachers reported using rulers, protractors, compasses, geometric models, slides, overhead projectors, mathematics audio tapes, and various other tools of the trade, most of which are probably supplied by the district. In the many classes with a wide ability range teachers prepare several extra credit worksheets from their own books and then issue them forth rapid fire to the faster students who finish the main assignment before the period ends. Such a juggling act, especially in junior high school, is often the only way teachers can keep all students productively employed, since letting the faster students work ahead in the textbook would soon render whole class instruction impossible. Of course, teachers choosing to fully individualize, sacrifice all whole class instruction and the daily juggling act described above is not necessary. The point to be noted is that the district should consider the need for a richer supply of materials in the secondary schools. Standard school supply may need to change, in order to meet modern educational needs, such as the one just described. The teachers should not have to finance such change.

A comment about electronic calculators is in order. At those times when a student needs to understand the reasons for certain steps in solving a problem, to ask whether a solution is reasonable, or, more generally, to think about a problem from a higher point of view, computational difficulties can interfere. Students with serious computational deficiencies end up bogged down in computation. It is understandable that they should come to dislike mathematics and quit trying. If the student has ready access to an electronic calculator, the computational roadblock to higher thinking can be removed. Providing students with calculators, when computational facility is not the direct pedagogical issue, may be a means of helping them to progress further in the curriculum. Also, availability of calculators could make the earlier suggestion of reducing ability grouping more feasible in teachers' minds, since the low achievers would not be stuck on computation all the time.

● ● The Curriculum -- The teachers interviewed were asked to describe a sample unit, to indicate the extent of individual differences in student ability and their manner of dealing with it, and to list the evaluation and grading criteria they employ.

Customarily, some new concept is introduced by the teacher, and then students solve problems in the textbook or on worksheets, the problems being designed to reinforce the students' understanding of the new concept. The teacher helps individual students with these problems. Furthermore, reinforcement occurs by means of almost daily homework (usually four assignments per week). Quizzes, often surprise quizzes, occur about once a week and a test about once every two weeks. Sometimes lessons begin with a brief review of the previous day's homework. Oral exercises and oral discussion sometimes take place. The teacher usually uses the chalkboard, but some teachers use an overhead projector. Students may be asked to solve problems at the chalkboard. Some teachers create subgroups of their students on the basis of a pretest of the unit, and the instruction may vary (and occur separately) for the various subgroups. When low motivation (or sometimes jobs held) causes poor attendance, fully individualized instruction is necessary, but otherwise, few teachers seem to fully individualize instruction. Many provide extra activities, often quite stimulating, for the faster students, as already mentioned.

Evaluation is usually based on quizzes, tests, homework and class participation, most teachers stressing the first two. Higher grades are based more on performance, whereas lower grades can sometimes be improved on the basis of effort. Also, higher level courses require performance for good grades more than do courses for the less able students, the latter tending to reward effort more.

Secondary mathematics teachers do not make very much use of physical materials, although there are notable exceptions. In the abstract, advanced courses physical materials probably would serve no purpose. In many of the less advanced courses physical materials, even some of the mathematics laboratory materials found in elementary schools, could be useful in stimulating students and clarifying some of the mathematics. Some examples are geoboards, algebraic balance beams, pendulums, measuring devices, and probability devices. Projects can involve making things such as polyhedrons, math art designs, or scale models. Secondary teachers often feel that time spent with such activities is time away from learning necessary mathematical techniques. In many cases, the slow-down in the curriculum might be worth it in terms of the stimulation and enrichment students would experience. Often such instruction reinforces valuable techniques in a unique way. This point should be considered by the district.

When asked about their emphasis on drill and practice, or on mechanical facility versus the understanding of mathematics, teachers in all but the advanced classes indicated that they employ at least some regular drill and practice. Quite often the homework is seen as providing this activity, but some teachers use a few minutes of skill maintenance activities each day. It is generally felt in the less advanced classes that some degree of mechanical skill must precede understanding and that stress on understanding must come in the more advanced classes.

Most teachers give their students appropriate "word problems" to solve, but problem solving in the sense of non-routine problem solving is seen by them as an activity for more advanced classes. In the same vein, expecting students to understand proofs, let alone write proofs or devise them, is felt to be a higher level process to which students may only gradually be introduced as they grow in mathematical capability.

Teachers of low achievers report many motivation problems. Some students no longer want to try and apparently will not improve. Some can be reached and will show change. Discipline can be a source of frustration to teachers with low achievers, as well as student inability to read the mathematics books. All kinds of methods are used to cope with the motivation problems; methods such as making mathematics instruction more relevant to life-like situations. One teacher reported regular use of the newspaper for this purpose. Methods also include firmness, personal talks, parent contacts, grading, and involving students in recording their own progress. Often, low achievers enjoy their work, if they already know the methods. But, they are reluctant to try anything requiring new methods.

• • Conclusions -- In the previous pages, the district's mathematics course offerings were described, and some aspects of curriculum and instruction were discussed. The recommendations made or implied will be stated briefly.

1) The district should consider a policy for improving the mathematics program for low achieving students as its top priority in the area of mathematics curriculum and instruction. The success of the program in meeting the needs of average and above average students, and the failures with the below average ones, show where the need for improvement lies. Among the alternatives, reducing ability grouping in junior high school and modifying the intermediate school program for below grade level pupils should be considered.

2) It may also be advisable that the administrative and supervisory job role of Kindergarten to Twelfth grade mathematics coordination be created. A prime responsibility for such coordination would

be helping the administrators and teachers at feeder and receiver schools establish and maintain communication concerning the mathematics programs at their schools. At present, no one in the district is accountable for the establishment of this communication; at least so far as is apparent to the teachers.

3) An improved articulation of the mathematics program is needed, particularly in the intermediate and junior high grades. Teachers at all levels have described the negative consequences of the present lack of articulation. Teachers will need to meet, in order to agree upon common objectives for their programs. The State Mathematics Framework could serve as a basis for such objectives.

4) The district should seriously consider ways to make more mathematics curriculum materials available to teachers showing the educational need for them, including materials of appropriate readability for low achieving students. Teachers whose classes have wide ranges of ability often have the need for materials such as games, puzzles, and enrichment books.

5) It is recommended that the district and its secondary mathematics teachers explore ways to incorporate more activities with physical materials

into the mathematics curriculum. The availability of such materials in a resource center and the staff development activities promoting their effective use are also commended.

6) It would also be advisable, in the view of a growing number of mathematics specialists, to explore ways to use electronic calculators effectively in mathematics instruction, especially with low achieving students. The availability of calculators would be valuable particularly to those secondary mathematics classrooms where they will serve important educational purposes.

- Content - Secondary Science Curriculum-Results and Discussion --

  - Course Offerings -- This study has revealed many strengths of the current program and some apparent weaknesses. It also raised some important issues needing resolution for future science teaching in the district. The course offerings are quite varied and are presented in Table 85. Remedial courses at Berkeley High are the non-lab courses offered in each of the discipline's three sub-divisions. Achievement groupings at West Campus are dichotomized, the middle and upper groups are collapsed; therefore, there are no advanced courses offered. King too uses this format; Willard unlike King, offers its upper group a sequence of advanced courses. The types of students associated with various courses is discussed in the section below.

  - The Curriculum -- There are a number of apparent strengths in the current program. Courses are offered in grades Seven to Twelve which vary widely in content, scope, and prerequisite achievement level (Table 85). (An exception in content seems to be the biological sequences discussed below. Refer to Page 244.) Important and fairly recent topic areas such as environmental science, oceanography, and earth science appear to be more accessible in Berkeley than they are on a national basis. In a similar vein, ten of the eleven teachers

Table 85. Course Offerings in Secondary Science

School	Course
King Junior High	General Science
(Grades 7-8)	ISCS (beginning Sept. 1975)
	Biology
	Earth Science
Willard Junior High	Advanced Biology
(Grades 7-8)	Oceanography[1]
	General Science
	High Potential Science
West Campus	Life Science
(Grade 9)	General Science
East Campus	Human Biology
(continuation Grades 9-12)	Science[2]
Berkeley High	Chemistry
	Biology
	Physics
	NOTE: These three groups are subdivided into:
	Single period (45 minutes) courses such as
	Biology
	Physical Science
	Oceanography
	Double period lab (80-85 minutes) courses such as
	Advanced Biology(all grades)
	Human Anatomy and Physics
	Advanced Placement Biology
	Physics 1 and 2
	Advanced Placement Physics
	IAC Chemistry
	Chemistry 1 and 2
	Advanced Placement Chemistry

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[1] reported as 1/3 each of biological, physical and environmental science

[2] reported as biology (pond), ecology, tidal zones of California

in the sample were able to identify specific examples of ways in which topics in human values were incorporated in their courses, and six of the eleven teachers mentioned that environmental issues were incorporated into their courses. Moreover, all schools represented in this sample provided science experiences for students of widely varying achievement and interest levels.

All teachers in the sample were able to identify specific methods by which they regularly assess the effectiveness of their own instruction. These included written student evaluations, standardized testing, verbal feedback from students, departmental evaluations, and pre- and post-testing. All teachers in the sample also had devised an organized procedure for assessing student progress. The number of methods ranged from three to six (quizzes, lab reports, tests, extra credit problems, projects, discussion) indicating that students were generally given a variety of options for expressing their understanding of the subject.

All teachers in the sample were able to identify three or more specific examples where they had attempted to improve their instruction through innovative practices. Examples included preparation of new teaching units, incorporation with class groupings, and lab activities related to science applications.

The teachers in the sample displayed a high degree of interest and enthusiasm generally for their teaching. An impression gathered mainly through informal observations of teacher interactions with individual students who came in and out of classrooms during the interviewing process was that it was more than "just a job".

However, there were several areas where improvement in the science curriculum should be considered. A marked redundancy and general lack of continuity in the curriculum, between grades and schools, was apparent. This problem was particularly evident in the biological sciences.

At the present time the grade level courses were reported as follows:

Seventh grade (required)	1 semester ISCS (Physical), 1 semester Biol. (King)
Eighth grade (often chosen by Seventh graders, no pre-requisite)	1 year general earth science (King), 1 semester oceanography/ 1 semester "advanced" Biol. (Willard)
Ninth grade West Campus	Non-lab biology for faster students, non-lab physical science for average and below
Ninth grade East Campus (Continuation)	Human biology and general science
Tenth to Twelfth grade	1 period a day biology ("regular") (can be taken without biol. courses previously)
Tenth to Twelfth grade	Various courses in chemistry, physics, anatomy, etc.

As can be seen by this brief summary, biology can be studied at Seventh, Eighth, Ninth grade and high school levels. Different foci in biology are not studied at each grade; the general ideas are just repeated in different ways according to the style of the teacher. And the "advanced" biology courses of Tenth and Eighth grade (Willard) are not second year courses; they are just "harder", supposedly. As a Willard spokesperson noted, students are placed in the advanced courses based on achievement scores. They may have studied no biology except in elementary school (Seventh graders can take such a course), and the teacher may have many students who have studied biology just the previous year. In the Tenth grade, students could conceivably have had two and one-half years of biology or one-half year of biology and still be in the same course. (King students do not seem to study biology in the Eighth grade so this problem is not so pronounced.) The redundancy is not quite so evident in the physical sciences.

In regard to the question of continuity it is clear that the program at King is different from the program at Willard, and yet they both feed into the same high school. In spite of the great emphasis of the junior high programs on biology, the corresponding staff at Berkeley High does not seem fully cognizant of the junior high program and assumes no previous knowledge of biology for students taking the "advance biology course. On the other hand the physics staff in the same high school reports that the students are generally well prepared in laboratory skills and that these are taken into account. In short, none of the junior high teachers attempts to coordinate his/her program with the high school programs, or vice versa. This assessment should not be construed as negative criticism; the intent rather is to point up the need for avenues of communication, and the time and resources to establish them.

● ● Conclusions -- Several conclusions follow the results obtained from the science interviews:

1) Little communication seems to exist between junior and senior high school science staffs.
2) No mechanism seems to be currently in operation working toward the establishment of such communication lines.
3) Many students repeat many topics in instruction.
4) Science below the senior high school level essentially "doesn't count," since it is virtually ignored by the high school at the same time it is repetitious.
5) Skills are not building as much as they might with respect to processes or content of science materials.
6) Some individual teachers are frustrated and turning inward as a response to this situation.

7) Related to the questions of redundancy and continuity is one of rationale. Although all of the teachers interviewed clearly had established curricula and were able to outline priorities for instruction and procedures for carrying it out, rationales for this activity were not clearly visible. For example, why is King adopting ISCS and on a semester basis? Why does Willard divide science by thirds into physical, environmental, and biological, and what determines a "third"? Why does King teach earth science and not Willard, and the reverse for oceanography? Why does West Campus teach non-lab courses for both faster and slower students? Why does Berkeley High offer such a range of science courses? Again, this is not to imply negative criticism for these current practices, but rather to raise the question of whether these practices are optimum for students' needs and teachers' capabilities and resources.

8) There seems to be a wide variation across grades Seven to Twelve in regard to the accessibility and frequency for using community resources for instruction. The reported range is from once a year (advanced placement chemistry) to twice a month (continuation school). This includes field trips, student resources volunteers and outside guest speakers. The reasons for this large variation have not been identified, but the

large majority of teachers interviewed reported a strong desire for more of these kinds of alternative instructional experiences for their students. In a community as rich in science resources as Berkeley and the larger San Francisco Bay Area, such programs would seem a natural opportunity.

9) Finally, eight out of eleven teachers reported that they began a new unit of science instruction by making a reading, writing, or vocabulary assignment related to the text. This kind of instructional procedure would seem highly appropriate in a reading, language arts, or English class but the model may be questioned in science if it is a regular procedure. Classical science processes (e.g., observing, classifying, hypothesizing, controlling variables, making predictions, manipulating physical materials) imply active procedures and processes for understanding nature. A book assignment for opening a science lesson is not as consistently congruous to this model as other options, even a laboratory demonstration by the teacher. Certainly scientists use reading and writing to communicate but usually after some laboratory knowledge has been gained.

10) B.U.S.D. should consider providing all Berkeley science teachers in grades Seven to Twelve with release time or with other equivalent administrative time in order to

carry out a series of joint meetings which would establish lines of communication. This action would be desirable in view of the need to better coordinate programs for 1976 and onward. A full or part time person, or perhaps a trained curriculum specialist, should work to facilitate such meetings, and to organize their agenda as well as a report of meeting outcomes.

It is suggested that a central objective of such meetings could be the establishment of district-wide priorities for teaching secondary science, at least around a few common themes while allowing for the existence of individual teacher styles and tastes in various science subject areas. Certainly the strong departments at both junior and senior high school deserve to be reinforced and supported by some commitment to logical sequencing and absence of redundancy.

It is essential that these planning and coordinating activities not become a forum for placing blame or rehashing frustrations and disappointments of the past. The following questions are offered as possible topic areas leading to constructive cooperative planning:

a. What are a few major themes in science where some agreement as to their sequencing, 7-12, might be reached? Biology seems a likely area in which to search.

b. What are a few major skills that likewise might be sequenced? The major skills might include: observing and describing, measuring, comparing, hypothesizing, testing, and explaining (in a causative sense).

c. What kind of emphasis is desired in all programs in regard to the process-content issue in science instruction? In this regard, do district teachers as a whole want non-lab science in the 7-12 pattern?

d. Currently, there exist wide differences in opinion regarding the concepts of science and technology. Should these differences be resolved and what are the implications for instruction of k-12?

e. Do all district science teachers 7-12 wish a more equitable distribution in regard to the frequency of special instructional sessions involving community resources? What should this distribution be? Are there more efficient (cost effective) ways to carry out field trips? Could transportation arrangements be teamed in new ways?

In summary, the bulk of data gathered in this study points to many very strong science programs in the Seventh to Twelfth grade levels in Berkeley. The intent of this report is to provide a constructive reflection of program strengths as well as to identify opportunities for growth. The major opportunity so identified is the establishment of new communication and coordination lines among all the science programs. The strong expectation is that such activity would further strengthen the total program, as well as improve morale and efficiency of individual instructional staffs.

- **Content - Secondary Social Studies Curriculum - Results and Discussion --**

  - **Course Offerings** -- The social studies program in the Berkeley secondary schools offers students a variety of course offerings. All Seventh grade students are required to take a world cultures and geography year-long course focusing on Asia, Africa and Europe. All Eighth graders take a U.S. History/ Civics course which typically includes units in the U.S. Constitution, the history of several minority groups, and the growth of big business, as well as an overview of U.S. history. Seventh and eighth grade students attending Odyssey (an off-campus ESP school) have a social studies program focusing on the environment, community planning, as well as a camping/outdoors program.

    Students at West Campus can choose from several courses that have as a general focus a study of world cultures and geography. These choices include a history/geography course, a history/anthropology course, a history/political science course, and a Black awareness course. Several of these courses are offered for high potential students, which increases the diversity of the course offerings.

    At Berkeley High School students can fulfill the U.S. History requirement by taking either a year-

Table 86. Course Offerings in Secondary Social Studies

School	Course
King Junior High (Grades 7-8)	Afro-American History, History/Geography 7, Advanced History 7, HIL History 8, History 7, HIL History/Geography, History 8 Advanced, Social Studies, History 8
Williard Junior High (Grades 7-8)	History 7, History 8, History 8 Advanced, History 7 Core, History Advanced 7 Core
West Campus (Grade 9)	Geography, HUI Sociology, Career, History/Geography, Black Awareness, Anthropology, HUI Politics, HUI Great Ages, HUI World Focus, HUI Berkeley History, HUI Political Change, HUI Sociology, HUI Political History
East Campus (continuation Grades 9-12)	Ethnic Studies, Sociology of Women and Men, Psychology, Sociology, Social Studies
Berkeley High	
Regular	California History, European History, World Geography, Social Studies Skills, Criminal Law, Sociology, Constitutional Law, Current World Affairs, Economics, American Political Institutions, Theoretical Psychology, U.S. Government, Asian-American Experience, American Indian
AGORA-Genesis	Cross-Cultural English History, U.S. History, Black Experience, Crime/Streets
College Prep	U.S. History, College Survival Skills
Model School A	Trends in Film, American Culture, Study of Man
School of the Arts	American Mind, Cultural Experiences I

long U.S. History course or one of several alternatives. The social studies course offering at Berkeley High School is quite extensive and includes courses in American political institutions, criminal law, sociology, economics, theoretical psychology, current world affairs, social studies skills, the American Indian, the Asian-American experience, California history, European history, and world geography. The four on-campus ESP programs offer additional courses. The School of the Arts program has a course on the American mind and on cultural experiences. These courses are only for students in the School of the Arts ESP program. The AGORA-Genesis program offers a course in the Black experience, a study of crime and street life, and a cross-cultural course which combines English and history. Model School A offers a course in American culture and a classical humanist-oriented course called The Study of Man. Berkeley College Prep offers a U.S. History course and a course in college survival skills.

These courses are, for the most part, history or social science courses with an emphasis on giving students general insights about historical periods or current concepts of society as these relate to contemporary issues. It is clear that the courses have been carefully developed and that teachers have a sincere interest in offering a quality course. Topics or units within the course have been organized to reflect special interests of students and important contemporary issues. It is also clear that the breadth of course offerings gives students many more choices about their social studies program than is typically available in high schools across the country.

A wide range of student abilities and a careful mixture of various ethnic groups was found in the junior high school social studies classes. However at the high school there were remedial classes for each course that fulfilled the U.S. History requirement. Some elective high school social studies courses offered as a part of the several ESP programs, also had a limited pupil population. For example, students in the School of the Arts ESP program had social studies only with other students from the ESP program. This meant that virtually all the students were White, talented students especially interested in the fine arts.

In a recent analysis of the *Quest for Alternative Routes to Adulthood,* Williamson argues that, "The problem with alternatives for youth is that we are not dealing with a random distribution of youth among available alternatives. There will inevitably be biases across social groups. Even in the unlikely case that all significant alternatives are available equally to all, these biases will occur because of different group preferences and biases introduced because of inequalities and inequities that already exist among youth." This conflict between the need to provide for alternative programs and the need to include a wide variety of students in basic social studies classes is an important issue for the social studies program at Berkeley High School.

One consequence of the "segregation" of students due to participation in ESP social studies programs is that it is difficult for students to have meaningful discussions of current issues or to deal with the feelings and beliefs of persons quite different from one's self. One teacher, who teaches a class of students from one of the ESP programs, stated, "These classes are less likely to have serious value conflicts because of the homogeneity of the class." Other negative and positive consequences could be presented. For example, teachers in the Model School A program perceived a number of positive benefits in a scholastically rigorous study of man, which only certain students were interested in. Rather than detailing the negative and positive consequences of heterogeneous or homogeneous social studies classes, it is important to identify the conflict which exists between the need to provide alternative (educational) programs and the need to include a wide variety of students in basic social studies classes. A variety of implicit and explicit purposes of social studies education are enmeshed in this question.

● ● The Curriculum -- In the interview for this study, each social studies teacher in the sample was asked about the goals and objectives of a social studies course which she or he taught. It is interesting that in discussing goals for their courses neither department chairpersons nor individual social studies teachers referred to the *Berkeley Unified School District History Objectives (7-12)*, a 32-page compilation of course offerings for the secondary social studies courses in the district. This document was prepared by a committee of social studies teachers from the various secondary schools in May, 1972, and contains a description of goals and objectives for many social studies courses offered in the secondary schools.

There were several patterns in the use of curriculum materials. In junior high schools, the basic text in the social studies courses are state-mandated texts prepared especially for California schools. In grades Nine to Twelve, there is no mandated text and most teachers do not use any text as a basic text. Instead, they tend to use three to four supplemental books, each for a certain part of the course. The supplemental books used in this way tend to be recent paperback books prepared for high school audiences.

Teachers gave several reasons for using supplemental books rather than a basic text. It allows teachers to gear the reading more closely to the special focus of the teacher in the course. It also provides students at different reading levels with a book more appropriate to their reading levels. In some cases, the previously purchased textbook, was too hard for most students so that a supplemental book became the actual basic text. It was clear the ESP funds made possible the purchase of many of the supplemental books.

Teachers at all levels used many teacher-prepared materials. These teacher-prepared materials included both assignment sheets and study guides as well as supplementary readings, maps and worksheets that helped students integrate information and draw conclusions. In general, these sheets were carefully prepared.

Teachers at all levels also made good use of films. At the junior high school level, the films tended to be closely related, in content, to the course. At the senior high school level the films tended to be either directly related to the course or were films about topics of special interest which would be viewed by various social studies classes in a large room near the social studies office.

There were also several patterns in the types of evaluation used. Evaluation criteria are discussed here because they reflect what aspect of the curriculum was given greatest emphasis. Teachers in junior high school tended to give more quizzes -- on the average of one or two per week -- to insure that students read the required material or understand certain facts. At West Campus, one teacher used quizzes in the manner typical of teachers at Berkeley High School -- quizzes were used quite infrequently and often were not part of the grade given a student.

Most teachers in the junior high schools, West Campus and Berkeley High School gave a unit test every three to four weeks. In junior high school this tended to be primarily an objective test, whereas in the high school it tended to have many essay questions. Additionally, most teachers had students do projects or papers. In the junior high schools these tended to be short papers where library skills were emphasized and occurred once or twice per semester. Students could also present their findings as an oral report or using some non-verbal media such as pictures or a poster. In senior high school there was a greater emphasis on papers and projects. One teacher, in fact, based his entire course on papers and projects.

Most teachers considered a student's class discussion and contribution in deciding a grade. Several teachers reported that a student's positive contribution would add to her or his grade but that a lack of discussion would not be held against the student because they felt there were many reasons why students did not participate in class. Many teachers had only vague criteria for deciding what constituted a significant contribution in class. This idea will be discussed further in a later section of this report. Finally, approximately half the teachers counted such things as class attendance and the summation of daily homework as part of the class grade. Interestingly, class attendance was of special concern and seemed to figure in the grade in ESP classes more than in regular high school studies classes.

Each teacher was asked to discuss a typical week or unit for her or his course. From this discussion, insights were gained as to the relationship of lecture, class assignments and class discussion. Very few teachers used a formal lecture as part of their classroom activities. Instead, teachers presented information where students were expected to take notes for short periods of time, and students could raise questions at any point in this presentation. In junior high schools the discussion tended to focus directly on understanding the factual information presented in the text. These discussions tended to be teacher-dominated, large-group discussions that were fairly structured in nature.

At West Campus and Berkeley High School, the discussions were also teacher-dominated, large-group discussions, but the focus of the discussion was more on gaining certain general insights about the subject matter rather than acquiring specific factual information. Most teachers reported that they needed to lead the class discussion because the students were not to the point where they could easily sustain discussion among themselves.

● ● Contemporary Purposes of Social Studies -- In the last ten years a number of new thrusts in social studies have appeared. In part, these new thrusts are a reaction to the assumption that a study of history and social science adequately prepares students for meaningful involvement as citizens. The new social studies thrusts included in this analysis are: analyzing or understanding the future, analyzing or discussing controversial issues or public policy issues, information-gathering skills such as map reading, studying charts, analyzing information from the media and locating information sources, forming generalizations, drawing conclusions, or making deductions or inferences about historical or contemporary events, understanding or dealing with the feelings of other people, and involving students directly in the community in a number of ways such as visits, study projects, and other action learning activities.

The adequacy of the Berkeley secondary schools social studies curriculum with respect to each of these new thrusts will be discussed below.

1) Analyzing or Understanding the future -- Two-thirds of the teachers interviewed said that they gave at least some emphasis to analyzing or understanding the future. However, in most cases analyzing or understanding the future was only a marginal

part of the course and was not handled well. A typical approach to analyzing or understanding the future is seen in the comment of one teacher, who said, "It's inherent in any history class. Much of the discussion focuses on the here and now. The help (in analyzing or understanding the future) comes in introducing a pattern of reasoning and helping students see the connectiveness of things -- that is, approaching knowledge from a historical frame of reference." No teacher had a unit or major section of the course that was explictly a study of the future. Only a few teachers had students conduct a trend analysis or think about policy formulation, including predictions of unintended as well as intended outcomes. Moreover, no teacher represented conducted simulation gaming, or other techniques explicitly designed to help students consider the future. Instead considerations of the future came at the end of discussions about current events or trends, and what they might lead to.

2) Analyzing or discussing controversial issues or public policy issues -- Three-Fourths of the teachers reported that at least some of their course was

devoted to analyzing or discussing controversial issues or public policy issues. For the most part, these discussions were teacher-led, large-group discussions rather than student-led, small-group discussions. In the interviews two interesting assumptions emerged about students' ability to carry on discussions in small groups:

a) Students don't know the facts, and until they know the facts they shouldn't discuss issues without a teacher's guidance.

b) Students can't carry on a controversial issue discussion without getting overly emotional or getting off the topic unless the teacher is directing the discussion.

Both these assumptions present serious dilemmas for social studies teachers. The first assumption is widely held by many teachers and often results in a curious situation where graduate students in a university are told that even they don't have sufficient factual information to carry on a discussion -- first they must learn the facts. This approach by teachers and professors is directly counter to the needs of citizens to make decisions on public issues even when all the essential facts are not available. It also raises the question of how students are to learn to make decisions if they are continually asked to suspend judgement until all the facts have been gathered and/or are known.

Across the nation a number of instances have been reported where even junior high school students are able to conduct controversial issue discussions without the direct guidance of the teacher. In some cases students have been taught specific skills for carrying on such discussions including differentiating fact, opinion and definition, relating specific situations to cultural values (such as freedom and equal educational opportunity), developing analogies, developing supporting evidence, challenging assumptions and evidence presented by others. A useful summary of these skills and techniques for developing them in students is found in *Taking a Stand, A Guide to Clear Discussion of Public Issues*. This booklet is part of the instructional materials developed by the Harvard Social Studies Project.*

3) Information Gathering Skills -- Most teachers reported they gave at least some attention to helping students develop information-gathering

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*Fred M. Newmann, Taking a Stand: A Guide to Clear Discussion of Public Issues. Columbus, Ohio: American Education Publications, 1967. 63 pages.

skills. For example, in junior high school classes that help consisted of explicit instruction (worksheets, etc.) which helped students learn to read and interpret basic political and physical maps. Most senior high school teachers reported that students knew how to read such maps. A few high school teachers reported that they gave students instruction in reading specialized maps.

Many teachers reported that they helped students analyze information from the media; however, few had specific instructional activities which helped students do this. Many of the teachers did help students develop skills in locating information services. In junior high school classes, this consisted of helping students use the library, find several reference books or other sources of information on a given topic and present this information either in writing, orally, or using "non-verbal" communication such as charts or pictures. In senior high school, it was often assumed that students knew how to use the library. These teachers helped students improve their library skills by requiring more sophisticated footnotes and bibliographies as well as more sophisticated research papers in general. Senior high school teachers also had students gain information from non-library sources such as by telephoning a knowledgeable person in the community or attending a meeting. These techniques for using non-library sources were often taught informally in connection with individual projects which students carried out.

4) Generalizations, Conclusions and Inferences -- Many of the teachers devoted a good deal of time to helping students relate historical events to each other and to contemporary issues. This development of analogies is a vital part of any social studies program. Many teachers also incorporated the notion of "causation" in their courses (such as what "caused" the Civil War or what "causes" certain people to smoke cigarettes.)* Few teachers, however, used scientific generalization in their courses in any formal way. Hunt and Metcalf describe scientific generalization as:

> ....lawlike statements which express a relationship among concepts. The generalization, "deficit financing contributes to inflation under conditions of full employment," is a law-like statement expressing a relationship between the concept "deficit financing," and the concepts, "inflation" and

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*For a useful exploration of "causation" in social studies, see Maurice P. Hunt and Lawrence E. Metcalf, Teaching High School Social Studies. New York: Harper and Row, 1968, pp. 144-161.

> "full employment": i.e., "If the national government practices deficit financing under conditions of full employment, then inflation of a certain kind is likely to result." *

They devote several chapters in their well-known methods textbook to exploring the use of concepts and generalizations in secondary social science courses. No teacher reported that (s)he used social studies materials such as the Fenton World History materials or the Amhearst American History materials where the preliminary purpose of the materials is to have students form generalizations and draw conclusions from "new data" such as historical documents.

5) Understanding the Feelings of Other People -- All of the teachers gave at least some emphasis to this goal which could be interpreted as either developing a concern and understanding for other ethnic groups in this society or around the world, or learning to understand and deal with the feelings of other students in the class. One teacher commented that his Ninth graders were much better at understanding others in the society or in the classroom. Whatever the historical trends have actually been, it is clear that many teachers feel this goal is quite important.

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*Maurice P. Hunt and Lawrence E. Metcalf, Teaching High School Social Studies. New York: Harper and Row, 1968, Pp. 84.

Some teachers have a number of useful instructional techniques for helping students understand and deal with the feelings of other people. Other teachers seemed to have only a few techniques and typically dealt with this whole goal only if "bad feelings were in the air". One teacher put it this way: "In discussion, they [students] learn to probe for understanding without being cruel and showing respect for others' feelings. In every class we get to a point where we have to talk about how to deal with each other." Such a view implies that instruction toward this goal should be given only when things get bad, i.e., students aren't being very civil with each other.

6) *Community Affairs* -- The last contemporary purpose of social studies concerns involving students directly in the community in a variety of ways. This involvement could be in the form of field trips or as part of individual student projects for any social studies course (with extensive time in the community) or in community internships where students work in a community agency.*

A rationale for the involvement of students in the community includes the following:**

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* See W. Ron James, *Finding Community: A Guide to Community Research and Action*. Palo Alto: James E. Freeland Associates, 577 College Avenue, Palo Alto, California.

** See the articles by Robert Hess and Fred M. Newmann in *Political Socialization*, and issue of *Harvard Educational Review*. Winter, 1967.

a) Students need to integrate knowledge, experience and involvement as part of their education.

b) Schools need to be a part of efforts to recreate a psychological and sociological sense of community.

c) Schools communicate a passive sense of citizenship to students; a more dynamic sense of citizenship is needed.

While the rationale for these programs is appealing, there are several difficulties in establishing such programs. One teacher at Berkeley High School tried to organize such a program as part of Experimental School and reported a typical problem: labor unions in the community oppose the hiring of high school students or even the use of volunteers in some places in the community. Moreover, it is difficult to set up "helpful" experiences and to handle the logistical problems involved with such programs. There are, of course, other problems in releasing students from school for such activities.

Few social studies teachers in Berkeley had students involved in community involvement activities although a number of teachers said they discussed local issues in class. Two teachers had taken students on a field trip during the year, and a few more teachers had helped students use community resources for an individual project; however, many teachers used community persons as speakers in class. Only one of the teachers offered specific instruction on how to gather information from community agencies and none reported that students were released from school to carry out community projects.

Conclusions -- The interviews with B.U.S.D. social studies teachers led to a series of results from which the following conclusions were derived:

1) First, ESP students at Berkeley High School currently take separate social studies courses. The question should be considered again as to whether the value of these separate courses to students outweighs the value of having a variety of students in all social studies courses. It is recommended that students in the School of the Arts program take social studies with other students at Berkeley High School and that, where possible, all social studies classes be open to all students.

2) An articulated social studies skills sequence needs to be built into all social studies courses. This sequence should include skills in information gathering, drawing conclusions, making generalizations, and making inferences. Greater emphasis is needed on:

   a) information gathering skills from non-library sources;

   b) the generation and testing of generalizations. This skill sequence should be interwoven into the existing social studies courses.

   The development of such an articulated skill sequence could, unfortunately, lead to the development of another "paper plan" like the *B.U.S.D. History Objectives (Grades 7-12)* plan, i.e., a plan that is rarely used. It might be more fruitful to develop this skills sequence within respective schools.

3) In discussing controversial issues, teachers do a good job of allowing students to express their own opinions and to raise controversial issues in class. However, in the evaluator's view, several changes would improve students' abilities to carry on meaningful discussions of controversial issues, including:

   a) Greater use of student-led small group discussions. Students need a chance to guide discussions of controversial issues and to practice these discussions. Groups of four to six students would allow for such practice.

   b) Planned as well as spontaneous discussions of issues. There seems to be a lack of planned discussions where students can gather information and rehearse responses to anticipated weak areas in their positions. There needs to be greater continuity in the student's preparation and participation in these discussions.

   c) Models of good discussions. Teachers usually take on the role of directing the discussion of controversial issues. In this role they don't provide a model for how to discuss such issues. Students need video or audio taped examples of what good discussions are like. Such models might include clarification of what the specific issues within a general discussion actually are, stipulations of the meaning of key words, stating one's position and rationale, stating supporting evidence and using appropriate analogies.

   d) Skills in conducting such discussions. Students need opportunities to practice these discussion skills one at a time. A number of practice exercises are suggested in materials by Oliver, Shaver, and Newmann.

4) B.U.S.D. might consider offering greater opportunities for community involvement. Greater opportunities for community involvement are needed as part of existing

courses and, perhaps, as part of a new elective course which would have community involvement as its major focus.

5) Sharing techniques and skills in helping students understand and deal with the feeling of other people could be a useful tool in teaching social studies in B.U.S.D.

Some senior high school teachers described a number of techniques they used to help students in this way. These techniques need to be shared and employed in Seventh and Eighth grade schools.

Instructional Methodology in B.U.S.D.

Data on instructional methodology was collected from three sources, the principal and administrator interviews, classroom observations, and teachers' surveys. Actual practices at the classroom level were measured by only one of these techniques, the classroom observation. In these observations, the I-Scale was used to estimate the degree of individualized teaching. The Teacher Survey, Part II, addressed the nature of 32 instructional dimensions as reported by teachers.

- The Instructional Planning and Policy Process-Results and Discussion -- Administrator and Principal interview data concentrated on identifying district and site policies, planning approaches and approved strategies. Specifically, administrators and principals were asked about instructional methodology in terms of the following dimensions: 1) teacher utilization in the classroom (i.e., options such as traditional self-contained classes, team teaching, multiple teachers within the class, subject specialty teaching, etc.); 2) student organization configuration across grades (i.e., options such as ungraded classes, grade grouping, peer teaching, etc.); 3) individualization (i.e., whole-class, small-group, or individual instructional focus, diagnostic-prescriptive strategies for individual students); 4) classroom management systems (i.e., the use of specific systems such as PIRAMID).

In general, the results of the surveys indicated that the central administration exercises limited control over the planning and utilization of instructional methodology practices. The district delegates this responsibility to the school sites, with the exceptions that 1) achievement testing is required and is to some extent used for diagnostic purposes, 2) that staff/pupil ratios are mandated, and 3) that individualized teaching has now been adopted as a district policy. Additionally, of course, district personnel assignments influence the type of practices that are possible. In all other areas, decisions are left to the sites with no review authority exercised by the central administration. This decentralized approach to instructional methodology planning apparently is consistent with the district's notion of optimizing flexibility at the site level.

Similar procedures are used at schools participating in State and Federally funded projects such as Compensatory Education, Follow Through, and ESP. In Compensatory Education, for example, the use of the PIRAMID management system, and efforts to suggest individualization strategies are emphasized. But, Compensatory Education schools make their own decisions concerning teacher utilization, grade configuration, etc. Follow Through schools are required to use the *responsive individualization model* and have instructional aides in all classes, with all other decisions being left to the school.

At the site level, instructional methodology practices are decided upon in a number of ways. Typically, however, a great deal of discretion has been left to individual teachers to decide how to organize themselves and their classes. They have merely been expected to gain approval for these practices from their principal. Many principals appraised this approach as being highly effective because they felt that each teacher should be able to use the teaching style that they feel is most effective. In terms of actual practices, Table 87 presents a school-by-school analysis of the methods which principals stated as the practices actually utilized.

- Teacher Utilization -- Almost all site administrators identified traditional self-contained classes as the primary teacher utilization strategy. This of course does not pertain to special programs or classes such as art and music in Kindergarten through Third grade schools, or pull-out remedial classes where support staff are used in addition or in lieu of the self-contained classroom structure.

  A few schools mentioned the use of team teaching as the second most often used approach. The use of team teaching evidently does not depend on grade level or the ESP and Non-ESP designation, as this practice was used at varying types of sites. No other kind of teacher utilization approach was mentioned as a

Table 87. Instructional Practices in B.U.S.D. Schools

School Name	Teacher Utilization	Grade Configuration	Student Classroom Organization/Individualization
Kindergarten to Third			
Cragmont	Traditional	Single and Multi	Small Group Individualized
Emerson	Traditional	Single and Multi	Small Group Individualized/Whole Group
Grizzly Peak	Traditional	Single and Multi	Small Group Individualized
Hillside	Traditional	Single	Small Group Individualized
John Muir	Traditional	Single and Multi	Whole Group
LeConte	Traditional	Single	Small Group Individualized
Oxford	Traditional	Multi	Small Group Individualized
Thousand Oaks	Traditional and Team	Single	Small Group Individualized
Tilden	Traditional	Single and Multi	Small Group Individualized
Washington	Traditional and Team	Single and Multi	Small Group Individualized
Whittier	Traditional	Single and Multi	Small Group Individualized
Kindergarten to Third-ESP			
Jefferson	Traditional	Single and Multi	Small Group Individualized/Whole Group
Early Learning Center	Traditional and Team	Multi	Small Group Individualized
John Muir*	Traditional	Single and Multi	Small Group Individualized
Kilimanjaro	Traditional	Multi	Small Group Individualized
Fourth to Sixth			
Columbus	Traditional	Single	Small Group Individualized
Franklin	Traditional	Single	Small Group Individualized/Whole Group
Longfellow	Traditional and Team	Single	Small Group Individualized
Malcolm X	Traditional and Team	Single	Small Group Individualized
Fourth to Sixth-ESP			
Franklin Multicultural	Traditional	Single and Multi	Small Group Individualized
Malcolm X Environmental	Team	Multi	Small Group Individualized
Seventh to Ninth			
King	Traditional	Single and Subject	Whole Group
Willard	Traditional	Single and Subject	Whole Group
West Campus	Traditional and Team	Single and Subject	Small Group Individualization/Whole Group
Seventh to Ninth-ESP			
Odyssey	Traditional and Team	Multi	Small Group Individualized
West Campus Alternatives	Team	Single and Subject	Small Group Individualized
Tenth to Twelfth			
Berkeley High School	Traditional	Subject	Whole Group
Tenth to Twelfth-ESP			
Genesis/Agora	Traditional and Team	Subject	Small Group Individualized
College Prep	Traditional	Subject	Small Group Individualized
Model A	Traditional	Subject	Small Group Individualized/Whole Group
School of the Arts	Traditional	Subject	Small Group Individualized
On Target	Traditional	Subject	Small Group Individualized/Whole Group
East Campus	Traditional	Subject	Small Group Individualized/Whole Group

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*Kindergarten to Sixth

primary strategy. Interestingly, several schools mentioned that team teaching had been used in past years, but was eliminated. This evidently stemmed from several factors: first, team teaching required additional staff time to insure the required communication and coordination; second, at the secondary level, team teaching can only be used in courses where enough students are enrolled to enable the assignment of more than one teacher; and third, it appeared that since the innovative status of team teaching lessened, interest waned. Finally, it appeared that team teaching at the Fourth through Sixth grade schools was primarily used as a tracking device for basic skill subjects in which teachers organized their classes on the basis of achievement grouping.

● ● Grade Configuration -- At the Kindergarten through Third grade sites, almost all schools used a combination of graded and multi-graded classes. In a few schools teachers have the option of moving with one class from grade to grade. In these cases, parents can decide if they want their child to remain with the same teacher for more than one year. At the Fourth through Sixth grade sites, all schools are single graded. This shift evidently stems from a more open structure and individualized program at Kindergarten through Third grade sites. At the secondary schools, grade configuration is not an issue since, with the exception of certain grade requirements, assignments are made on the basis of course selection and not grade level. It should be noted, however, that the secondary schools, instead of grade grouping, utilize achievement grouping. In terms of ESP and Non-ESP sites, it appears that ESP schools used multi-graded classes more often than Non-ESP schools, with some schools such as the Early Learning Center and Odyssey being specifically designed for only multi-graded classes.

• • Student Organization and Individualization in the Classroom -- Student organization and individualization in the classroom varies across and within schools. All Kindergarten through Third grade schools, with the exception of John Muir and Jefferson, stated that small-group individualized instruction was the primary strategy. John Muir and Jefferson, by design, have provided whole-group traditional and small-group individualized instruction as options for parents. At the Fourth through Sixth grade schools, small-group individualization was also mentioned as the primary strategy by all sites. At the secondary level, individualization varied depending upon whether the program was ESP or Non-ESP. The Non-ESP schools emphasized traditional, whole-group instruction and the ESP schools emphasized small-group, individualized instruction.

- • Diagnosis and Prescription -- The use of diagnostic techniques varied substantially among schools both in terms of procedures and frequency. Some schools used the State standardized test results (CTBS) as the primary diagnostic instrument, whereas others relied upon teacher-made tests, existing instruments in systems such as PIRAMID. The frequency of diagnosis also varied. Some schools used only pre- and post-data and others reported having a continuous diagnostic program. Many schools recognized that they were lacking effective diagnostic and prescriptive procedures. They attributed this partly to their belief that most diagnostic approaches had not been developed to a point that would permit successful implementation. Moreover, where systems such as PIRAMID were available, they were used to a limited degree because of perceived ineffectiveness and the lack of teacher training or willingness to use the system.

- • Management Systems - - The use of management systems varied by school, primarily in terms of their relation to State and Federal programs. Some Compensatory Education schools used the PIRAMID system, while others used the Criteria Reading System. Many schools, including those in both ESP and Non-ESP sites utilized HIL for reading as well. However, schools differed in their judgements about how effective these systems have been.

• • Conclusions -- Several conclusions can be drawn from the investigation of B.U.S.D.'s policies and planning processes for instructional methodology.

1) Instructional methodology policies and practices, including teacher utilization, student organization, and individualization, are primarily a function of individual school and teacher decision. The district has very few policies in those areas and to date has exercised almost no control over most site policies. This has left instructional style as a matter for teacher choice. This situation is expected to change as a result of the district's formal adoption of a policy for individualized instruction.

2) In terms of actual practice, most schools reported using the traditional self-contained classroom approach, and a few schools reported a limited amount of team teaching. Kindergarten through Third grade and Fourth through Sixth grade schools primarily have graded classes, and secondarily have ungraded classes. In terms of school policy, all Kindergarten through Third grade and Fourth through Sixth grade schools stated that individualization was a policy. Secondary schools stated that both styles are used. Importantly, however, no real operational definition of individualization was provided by the individual

schools, or for that matter, by the district. Thus, individualization may be, and probably is, interpreted differently by different personnel. In this regard, we recommend that before calling for individualized teaching as a common instructional approach, that the district should develop a specific behavioral definition of individualization that can actually be utilized in the classroom. Second, considerable deliberation should occur regarding where varying teaching styles are most productive in terms of student outcomes. The impact study will provide useful information on this point.

● Individualization

● ● Classroom Observation Results -- The product obtained from each classroom observation was 1) an I-Score ranging from 1 to 40 which represents, by a direct and ascending relationship, the degree to which individualized teaching was implemented in that classroom, and 2) the model of instructional methodology which was in effect in the classroom; i.e., one of four different types of individualized teaching or the traditional style which focuses on the whole classroom. The data set formed by the recorded observations was then examined on a grade by grade, grade grouping by grade grouping, school by school, and ESP by Non-ESP basis. Combinations of these variables were also examined for I-Scores and for models of individualization. Further, the relationship between I-Scores and models of individualization was analyzed.

Table 88 summarizes the means and standard deviations of I-Scores for each elementary grade level, special combined grade level arrangements, and subject areas at the secondary level where individual grade levels are indistinguishable. Also displayed in Table 88 for each of these units is the percent of classrooms in which a score of 20 or

TABLE 88. I-SCORES AND MODELS OF INDIVIDUALIZATION FOR ELEMENTARY GRADES, SECONDARY SUBJECT AREAS, AND SPECIAL GRADE COMBINATIONS

UNITS OF ANALYSIS		I - SCALE					MODELS OF INDIVIDUALIZATION[1]										
	GRADES	N	SD	ABOVE 20 %C	BELOW 20 %C	C	1 C	1 %C	2 C	2 %C	3 C	3 %C	4 C	4 %C	5 C	5 %C	C
ELEMENTARY	Kindergarten	17.76	6.27	50	50	34	18	53	3	10	1	3	1	3	8	24	34
	First	17.14	7.27	38	62	21	9	43	5	24	0	0	2	10	5	24	21
	Second	17.25	6.96	45	55	20	12	60	1	5	0	0	1	5	6	30	20
	Third	17.55	9.06	46	55	22	10	46	4	18	0	0	2	9	6	27	22
	Fourth	16.77	9.14	50	50	26	9	35	5	19	0	0	0	0	12	46	26
	Fifth	14.87	9.57	35	65	23	7	30	4	17	0	0	2	9	10	44	23
	Sixth	12.81	8.18	23	77	26	5	19	2	8	2	8	0	0	17	65	26
SECONDARY	Mathematics	10.66	9.25	22	78	45	9	20	4	9	2	4	0	0	30	67	45
	English	10.76	7.65	16	85	58	11	19	4	7	5	9	0	0	38	66	58
	Social Studies	8.45	7.92	13	87	38	5	13	2	5	0	0	0	0	31	82	38
	Science	8.17	7.17	11	89	36	4	11	0	0	1	3	0	0	31	86	36
ELEMENTARY - SPECIAL GRADE COMBINATIONS	Kindergarten-First	17.68	7.01	42	58	19	9	47	4	21	0	0	1	5	5	26	19
	Kindergarten-Second	23.00	0.00	100	0	2	1	50	1	50	0	0	0	0	0	0	2
	Kindergarten-Third	21.67	7.51	67	33	3	3	100	0	0	0	0	0	0	0	0	3
	First-Second	16.82	8.02	27	73	11	5	46	1	9	1	9	0	0	4	36	11
	First-Third	19.40	7.30	60	40	5	4	80	1	20	0	0	0	0	0	0	5
	Second-Third	16.70	8.39	41	59	27	17	63	3	11	1	4	2	7	4	15	27
	Fourth-Fifth	14.25	8.73	25	75	4	1	25	0	0	0	0	1	25	2	50	4
	Fourth-Sixth	16.33	6.66	33	67	3	2	67	1	33	0	0	0	0	0	0	3
	Fifth-Sixth	15.67	7.87	33	67	6	2	33	2	33	0	0	0	0	2	33	6
	First-Sixth	15.00	0.00	0	100	2	0	0	2	100	0	0	0	0	0	0	2
	TOTAL	13.77	8.67	31	69	429	143	33	52	12	13	3	12	3	211	49	431

$F(20,410) = 4.96$, $p < .01$ $x^2\ (20df) = 47.80$, $p < .1$ $x^2\ (80df) = 176.29$, $p < .001$

C = Number of classrooms or teachers per cell

[1] Rounded to the nearest whole number; minor errors due to rounding should be expected.

more was obtained, or in which less than 20 was obtained. A score of 20 was designated by Woog and Gellman (1974) as the cutoff point above which instruction should be considered individualized and below which instruction should be considered non-individualized.

A one-way Analysis of Variance revealed a main effect ($F(20,410) = 4.66, p < .01$) between grades for the I-Score. An examination of the magnitude of mean scores from Kindergarten through secondary subject areas shows that there is an inverse relationship between the degree of individualization and the level of the grade. Kindergarten children experienced a relatively higher degree of individualization than did children in the Sixth grade. Children in the Sixth grade experienced a relatively higher degree of individualization than did those in any of the secondary subject areas. Of the secondary subject areas, English was the most individualized and science the least. It is important to note that although individualization was higher at some grades than at others, for the standard age-determined classes, the average I-Score never attained the 20 point level (e.g., First grade, Second grade, etc.) considered by Woog and Gellman (1974) to be indicative of individualized teaching. Two of the groups with special grade combinations, Kindergarten-Second and Kindergarten-Third, have mean I-Scores which exceed 20 points (23.00 and 21.67, respectively).

The linear trend for I-Scores to decrease at progressively higher grade levels is also seen in the analysis of grade groupings (Table 89). The mean I-Score was 17.53 for Kindergarten to Third grades, 14.90 for Fourth to Sixth grades, 11.01 for Seventh to Ninth grades, and 8.37 for Tenth to Twelfth grades. An Analysis of Variance of this data identified a main effect for grade grouping ($F(3,425) = 30.0862$, $p < .01$).

When the number of classrooms at each grade level is inspected for the percentage which is either individualized (20 I-Scale points or above) or non-individualized (below 20 I-Scale points), the same indirect, linear trend occurs. Table 88 shows that the percentage of classes with I-Scores over 20 points steadily declines as the grade level increases. This is also apparent from the data for grade groupings in Table 89. In addition, Table 88 shows that the percentage of I-Scores over 20 is highly variable for classes with special grade combinations. The incidence of scores in the high range varies from 0% in one special grade combination (First-Sixth grades) to 100% in another (Kindergarten-Second grades). An analysis of the differences between all grade levels for high versus low range I-Scores revealed that a statistically significant effect prevailed ($x^2(20df) = 47.80$, $p < .000$).

TABLE 89. I-SCORES AND MODELS OF INDIVIDUALIZATION FOR GRADE GROUPS OF ALL SCHOOLS

UNITS OF ANALYSIS	I - SCALE					MODELS OF INDIVIDUALIZATION[1]										
GRADE GROUPS ALL SCHOOLS	M	SD	ABOVE 20 %C	BELOW 20 %C	C	1		2		3		4		5		C
						C	%C	C	%C	C	%C	C	%C	C	%C	
Kindergarten-Third	17.53	7.37	54	46	164	88	54	26	16	3	2	9	6	38	23	164
Fourth-Sixth	14.90	8.72	35	65	88	26	30	14	16	2	2	3	3	43	49	88
Seventh-Ninth	11.01	7.92	19	81	90	19	21	5	6	3	3	0	0	63	70	90
Tenth-Twelfth	8.37	8.06	13	87	87	10	12	5	6	5	6	0	0	67	77	87

F(3,425) = 30.0442, p<.01

C = Number of classrooms or teachers per cell

[1] Rounded to the nearest whole number; minor errors due to rounding should be expected.

As shown in Table 88, only 31% of all classes, irrespective of grade level, attained I-Scores over 20 points high. In contrast, 69% of all classes scored below 20 on the I-Scale.

Table 88 presents the frequency at which each of five different models of instructional methodology was utilized. The differences in utilization of models by grades is statistically reliable (x^2(80df) = 176.29, $p < .000$). In accord with the trend for increasingly advanced grades to have the lower I-Scores, the instructional model data in Table 88 show that the incidence of the traditional teaching model becomes increasingly prevalent for the higher grades. In contrast, there is an increasing tendency to utilize individualized models 1 and 2 (Active, Teacher-Directed Individualization and Reponsive Individualization) as the grade level (or age of the children) declines. The results for grade groupings in Table 89 also reflects this pattern.

As can be seen from an examination of the instructional models in use in the special classroom combinations of grades (Table 88), a clear pattern of instructional methodology is difficult to discern for these settings. Seven of the ten special combinations are comprised of very few classrooms. In general, however, there appears to be a preference for the first and second models (as was true of the standard age-determined grade levels). Model 5, the traditional teaching style, was also utilized with some prominence in some of the settings with special grade combinations. For example, over one quarter of the ten Kindergarten-First grade combinations used the traditional style and 36% of the eleven First-Second grade combinations did so. An examination of the incidence with which the various models of individualization are used by the total array of basic skill classroom teachers, discloses that the traditional approach to teaching is most popular in B.U.S.C. (Model 5, 49%), followed in order by Active, Teacher-Directed Individualization (Model 2, 12%), Permissive, Cognitive Individualization (Model 3, 3%), and Permissive, Non-Cognitive Individualization (Model 4, 3%).

The degree of individualized teaching, as measured by the I-Scale in each B.U.S.D. school, is displayed in Table 90. Also provided in Table 90 is the percentage of classrooms in each school which obtained more or less than 20 points on the I-Scale. The range of I-Scores attained by B.U.S.D. schools extended from 2.00 to 26.00. A One-way Analysis of Variance revealed a significant main effect between the I-Scores of the various schools ($F(32,398) = 4.4161$, $p < .01$). An analysis of the percentage of classes

TABLE 90. I-SCORE AND MODELS OF INDIVIDUALIZATION FOR SCHOOLS

UNITS OF ANALYSIS	I - SCALE					MODELS OF INDIVIDUALIZATION										
SCHOOLS	M	SD	ABOVE 20 %C	BELOW 20 %C	C	1		2		3		4		5		C
						C	%C	C	%C	C	%C	C	%C	C	%C	
Cragmont	20.00	7.59	69	31	16	5	31	1	6	0	0	6	38	4	25	16
Emerson	13.79	6.47	14	86	14	8	57	2	14	0	0	0	0	4	29	14
Grizzly Peak	23.80	2.95	100	0	5	4	80	0	0	1	20	0	0	0	0	5
Hillside	19.17	6.39	33	67	12	8	67	3	25	0	0	0	0	1	8	12
John Muir	14.00	8.19	33	67	3	1	33	0	0	0	0	0	0	2	67	3
Le Conte	15.90	7.60	27	73	11	6	55	2	18	0	0	0	0	3	27	11
Oxford	16.55	9.21	46	55	11	6	55	1	9	0	0	0	0	4	36	11
Thousand Oaks	16.25	8.40	40	60	20	9	45	4	20	0	0	0	0	7	35	20
Tilden	19.50	5.51	50	50	4	2	50	0	0	0	0	0	0	2	50	4
Washington	14.53	6.91	24	77	17	13	77	1	6	0	0	0	0	3	18	17
Whittier	19.25	4.91	56	44	16	8	50	4	25	1	6	2	13	1	6	16
Early Learning Center	26.00	0.00	100	0	2	2	100	0	0	0	0	0	0	0	0	2
John Muir Child Develop.	21.07	8.19	67	33	15	4	27	8	53	1	7	1	7	1	7	15
Kilimanjaro (K-6)	15.00	0.00	0	100	2	0	0	2	100	0	0	0	0	0	0	2
Columbus	13.82	7.41	35	65	17	10	59	0	0	0	0	1	6	6	35	17
Franklin	15.28	8.66	44	56	18	3	17	5	28	1	6	1	6	8	44	18
Longfellow	13.46	8.66	29	71	24	6	25	5	21	0	0	0	0	13	54	24
Malcolm X	16.57	14.06	33	67	21	6	29	1	5	0	0	1	5	13	62	21
Jefferson	16.78	5.89	39	61	18	12	67	0	0	0	0	0	0	6	33	18
Franklin	21.43	7.66	57	43	7	1	14	3	43	1	14	0	0	2	29	7
Malcolm X	6.00	0.00	100	0	1	0	0	0	0	0	0	0	0	1	100	1
King Junior High	9.03	7.73	11	89	36	5	14	3	8	0	0	0	0	28	78	36
West Campus	12.29	8.40	29	71	17	5	29	1	6	0	0	0	0	11	65	17
Willard Junior High	12.12	8.24	27	73	26	5	19	1	4	2	8	0	0	18	69	26
Berkeley High	7.00	6.41	7	93	55	3	6	3	6	2	4	0	0	47	86	55
Odyssey	20.50	3.54	50	50	2	2	100	0	0	0	0	0	0	0	0	2
West Campus	11.22	5.78	100	0	9	2	22	0	0	1	11	0	0	6	67	9
Agora-Genesis	14.00	9.17	33	67	3	2	67	0	0	0	0	0	0	1	33	3
Berkeley College Prep.	6.20	8.84	0	100	5	1	20	0	0	0	0	0	0	4	80	5
Model School A	5.25	7.21	0	100	8	0	0	0	0	1	13	0	0	7	88	8
On-Target	2.00	2.83	0	100	2	0	0	0	0	0	0	0	0	2	100	2
School of the Arts	9.00	8.54	0	100	3	1	33	0	0	0	0	0	0	2	67	3
East Campus	17.00	10.89	55	46	11	3	27	2	18	2	18	0	0	4	36	11
TOTAL	13.91	9.01				143	33	52	12	13	3	12	3	211	49	431

$F(32,398) = 4.42$, $p < .01$ $\chi^2\ (32df) = 87.58$, $p < .001$ $\chi^2\ (128df) = 313.02$, $p < .001$

C = Number of classrooms or teachers per cell

[1] Rounded to nearest whole number; Minor errors due to rounding should be expected

scoring above and below 20 also yielded a statistically significant effect (x^2 (32df) = 87.58, $p < .001$).

When the mean I-Scale score for each school is examined, only four of the thirty-three B.U.S.D. schools and programs emerge as having individualized teaching methodologies: Grizzly Peak (23.80), Early Learning Center (26.00), John Muir Child Development (21.07), and Franklin ESP (21.43). Moreover, none of the B.U.S.D. schools attained mean I-Scale scores in the upper reaches of the scale; i.e., in the 30 to 40 point range. There are ten B.U.S.D. schools in which over 50% of the classes attained I-Scores greater than 20. Three of these were Non-ESP elementary schools (Cragmont, Grizzly Peak, and Whittier) while all others were ESP schools or programs (Early Learning Center, John Muir Child Development, Franklin ESP, Malcolm X ESP, Odyssey ESP, West Campus ESP, and East Campus ESP).

The relative utilization of five different instructional methodologies in B.U.S.D. schools is shown in Table 90. Model _1_ (Active, Teacher-Directed Individualization) and Model _5_ (Non-Individualization), are most prominantly utilized. If the data for each model is reviewed for the number of schools in which over 50% of the basic skill teachers utilized that particular model, it can be seen that ten of the thirty-three schools adopted Model _1_ and eleven of the thirty-three adopted Model 5. There were only two that adopted Model 2 and none of the schools adopted Models 3 or 4. The overall difference between schools in terms of the percentage of classes that scored above 20 on the I-Scale is statistically reliable ($x^2(32df) = 87.58, p < .001$).

Table 91 describes the differences and similarities between the ESP and Non-ESP programs in B.U.S.D. with respect to individualized teaching. A One-way Analysis of Variance of I-Scale scores determined that a statistically significant effect at the .05 confidence level did not exist between the two programs ($F(1,429) = 3.1918$, $p = .05$ requires 3.84). Yet the difference was suggestive or a trend for somewhat greater individualization in the ESP program. However, the percentage of ESP classrooms which obtained I-Scores greater than 20 did not reliably exceed those of the Non-ESP program ($x^2(1df) = .85, p = .36$).

The reliable difference between the instructional models employed in the ESP and the Non-ESP programs is exhibited in Table 91 ($x^2(4df) = 10.14, p <.04$). While the percentage of utilization of Model 1 is highly similar for the two programs (ESP = 34 %; Non-ESP = 33 %), there is a greater degree of variability with respect to the other models. In general, ESP tends to utilize the remaining three individualized models to a greater extent (in Model 2 ESP = .17 % and

TABLE 91. I-SCORES AND MODELS OF INDIVIDUALIZATION FOR THE ESP AND NON-ESP PROGRAMS

UNITS OF ANALYSIS	I - SCALE					MODELS OF INDIVIDUALIZATION										
	M	SD	ABOVE 20 %C	BELOW 20 %C	C	1		2		3		4		5		C
						C	%C	C	%C	C	%C	C	%C	C	%C	
ESP	15.24	8.19	35	65	88	30	34	15	17	6	7	1	1	36	41	88
NON-ESP	13.39	8.52	29	71	343	113	33	37	11	7	2	11	3	175	51	343
						143		52		13		12		211		431

$F(1,429) = 3.19$
p of .05 requires 3.84

$\chi^2\ (1df) = .83,\ p < .36$

$\chi^2\ (4df) = 10.14,\ p < .04$

c = number of classrooms or teachers per cell

[1] Rounded to the nearest whole number; minor errors due to rounding should be expected.

Non-ESP = 11 %; in Model 3 ESP = 7 % and Non-ESP = 2 %; in Model 4 ESP = 1 % and Non-ESP = 3 %) and the traditional instructional approach to a lesser extent (in Model 5 ESP = 41 % and Non-ESP = 51 %).

Table 92 revealed some very reliable differences in I-Scale scores for the various ESP and Non-ESP grade groupings. The I-Scale scores for the four Non-ESP grade groupings mirror the trend delineated earlier for an inverse relationship between I-Score and grade level (or age of students). Teachers of Non-ESP Kindergarten through Third grade classes obtained a mean I-Score of 17.09, while teachers of grades Four through Six, Seven through Nine, and Ten through Twelve, obtained 15.19, 10.75, and 7.00, respectively. This pattern is also reflected in the percentage of Non-ESP classrooms which attained I-Scores greater than 20 (x^2(3df) = 11.9817, $p < .007$). A similar linear pattern for I-Scale scores was established for ESP grade groupings. However, the pattern revealed by the percentage of ESP classes in the various grade groupings with I-Scores greater than 20 was curvilinear rather than linear (x^2(3df) = 11.9812, $p < .007$). This suggests a trend for more traditional teaching styles at the Seventh through Ninth level.

An examination of the pattern of adoption of

TABLE 92. I-SCORES AND MODELS OF INDIVIDUALIZATION FOR EACH ESP AND NON-ESP GRADE GROUP

	UNITS OF ANALYSIS	I - SCALE					MODELS OF INDIVIDUALIZATION[1]										
	GRADE GROUPINGS ESP AND NON-ESP	M	SD	ABOVE 20 %C	BELOW 20 %C	C	1 C	1 %C	2 C	2 %C	3 C	3 %C	4 C	4 %C	5 C	5 %C	C
ESP	Kindergarten-Third	19.14	7.23	54	46	35	18	51	8	23	1	3	1	3	7	20	35
	Fourth-Sixth	19.50	8.94	50	50	8	1	13	3	38	1	13	0	0	3	38	8
	Seventh-Ninth	12.91	6.49	9	91	11	4	36	0	0	1	9	0	0	6	55	11
	Tenth-Twelfth	10.72	9.97	22	78	32	7	22	2	6	3	9	0	0	20	63	32
NON-ESP	Kindergarten-Third	17.09	7.37	42	58	129	70	54	18	14	2	2	8	6	31	24	129
	Fourth-Sixth	15.19	10.32	34	66	80	25	31	11	14	1	1	3	4	40	50	80
	Seventh-Ninth	10.75	8.10	20	80	79	15	19	5	6	2	3	0	0	57	72	79
	Tenth-Twelfth	7.00	6.42	7	93	55	3	6	3	6	2	4	0	0	47	86	55

ESP: x^2 (3df) = 11.9812, $p < .007$
Non-ESP: x^2 (3df) = 26.5124, $p < .000$

K-3 : x^2(4df) = 2.43, $p = .66$
4-6 : x^2(4df) = 8.03, $p < .10$
7-9 : x^2(3df) = 3.75, $p = .29$
10-12: x^2(3df) = 7.31, $p = .06$

C = Number of classrooms or teachers per cell

[1] Rounded to nearest whole number; minor errors due to rounding should be expected.

instructional models in Table 92 by ESP and Non-ESP gra groupings shows again that the traditional approach becomes progressively prominent as the grade level increases. In ESP, the percentage of classes using the traditional style of Model 5 increases from 20 % in the Kindergarten through grade Three grouping, to 63 % at the high school level. In Non-ESP, 24 % utilize Model 5 at the Kindergarten through Third grade level and this progresses steadily to 86 % at the high school level. The difference between ESP and Non-ESP is more pronounced in the remaining four models, all of which represent individualized forms of teaching. There is a somewhat greater incidence of Models 1, 2, and 3 in ESP than in Non-ESP classes. Model 4 tends to be used somewhat more often by Non-ESP teachers. Separate statistical analyses of the models of individualization used by ESP and Non-ESP classes were performed for each grade grouping. ESP and Non-ESP classes were found to differ in a marginally significant manner in the Fourth through Sixth grade level (x^2(4df) = 8.03, $p < .10$) and at the Tenth through Twelfth grade level (x^2(3df) = 7.31, $p = .06$). In the earlier of these grade groupings ESP classes utilize Model 2 substantially more than Model 1 as an individualized method of teaching. Vice versa, the Non-ESP classes utilize Model 1 substantially more than Model 2. At the high school level there is relatively less utilization of Model 5 and more of Model 1 in ESP classes than is the case in Non-ESP classes.

The final set of analyses performed on the B.U.S.D. individualized teaching data pertains to the relationship between the I-Scale scores and the five models of individualization. Table 93 depicts these relationships. There is a statistically significant difference between the I-Scores of the five models ($F(4,426) = 97.0819$, $p < .01$). As expected on a conceptual basis, Model 5 (Non-individualized) attained the lowest mean I-Score (7.82). Models 1, 2, 3, and 4 attained mean I-Scores of 18.13, 21,44, 22.54, and 23.58.

• • Classroom Observation Discussion -- The observations conducted in the classrooms of all B.U.S.D. basic skill teachers have led to the first comprehensive and empirically based understanding of the instructional methodologies used by teachers in the Berkeley schools. Keeping in mind that the I-Scale scores per se cannot be assumed to reflect teaching effectiveness[*], the classroom observations clearly demonstrated that the traditional, non-individualized approach to instruction is popularly employed in Berkeley public schools, particularly at the

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[*] The relationship between I-Scale scores and student outcomes will be addressed in the impact study.

TABLE 93. RELATIONSHIP OF I-SCORE TO MODEL OF INDIVIDUALIZATION

MODELS OF INDIVIDUALIZATION	I-SCALE SCORE				
	C	M	SD	ABOVE 20 %C	BELOW 20 %C
I	143	18.13	6.15	51.0	49.0
II	52	21.44	7.12	32.7	67.3
III	13	22.54	5.44	38.5	61.5
IV	12	23.58	4.89	25.0	75.0
V	211	7.83	6.29	5.2	94.8
	431	13.77	8.67		

$F(4,426) = 97.08, p < .01$ $\chi^2 (432) = 136.0828, p < .001$

C = Number of classrooms or teachers per cell secondary level. Moreover, many elementary grade teachers prefer the traditional whole-class focus for their teaching. Even in the grades and in the schools or programs in which the I-Scale scores were the highest, and thus indicative of the highest degree of individualization in B.U.S.D., the I-Scores were well below the greatest degree of individualization possible.

Another interesting finding about the degree of individualized teaching in the B.U.S.D. is that this approach is not related to schools or programs in a fundamental way. Although ESP schools tended to use the individualized models of instruction with somewhat greater frequency than did the Non-ESP program, the clearest result was that the ESP and Non-ESP programs were very similar in their utilization or lack of utilization of individualized teaching. Further, the classroom teaching typical of only a few schools in either ESP or Non-ESP can be legitimately called individualized. The single and most predictive property of individualized teaching in the B.U.S.D. is grade level. The lower the grade level, or younger the children, the higher is the probability of individualized teaching.

Given the above results on the incidence of individualized teaching in B.U.S.D., it is also of interest to note that only one of the four models of individualized teaching could be identified as a popular approach. This most popular of the individualized models, 1, Active, Teacher-Directed Individualization, is also the most structured form of individualization. Perhaps it is only to be expected that a group of teachers who, in large numbers, are attracted to the traditional teaching approach should also be inclined to adopt the most teacher-directed form of individualization.

A complete understanding of the roles that the individualized or the traditional styles of teaching play in education can only be attained when the student and teacher outcomes associated with each are known. The impact study will bring direct evidence to bear on these subjects.

1) Conclusions and Recommendations -- The data gathered on instructional methodology via the classroom observations produced the following series of conclusions:

   a) There was an inverse relationship between the I-Score and B.U.S.D. grade levels and grade grouping level. Thus, the younger B.U.S.D. students experienced more individualized teaching while students at upper grades experienced progressively more traditional styles of teaching. Finally, at the high school level, a highly traditional whole-class approach was utilized almost exclusively and the incidence of high I-Scores was very low.

b) The relative utilization of individualized versus traditional teaching styles, as evidenced by either I-Scores or models of individualization was more variable for the special elementary grade combinations.

As a result, the probability of receiving the traditional approach as indicated by the models, was greater for the special grade combination enrollee than for the single grade level class. However, there was a greater proportion of high I-Score classes among the standard single grade classes and the I-Scores for the former tended to reach higher levels than did the latter.

c) None of the grades or special grade combinations achieved a level of individualized teaching which would be considered highly individualized. There were no mean I-Scores at or about 20 points (the criterial point between individualized and traditional teaching styles) in any of the single grades and only two such scores for the ten special grade combinations. Two-thirds of all B.U.S.D. classes had I-Scores below the cut-off point for individualization. In no grade or grade combination was a mean I-Score ranging between 30 and 40 attained.

d) The instructional model enjoying the greatest popularity in B.U.S.D. was 5, the Non-individualized instructional approach. The second most popular was

1, the Active, Teacher Directed approach. This approach is most similar to what is typically referred to in B.U.S.D. as the diagnostic-prescriptive approach. Model 2, Responsive, Individualization was also utilized to some small degree. This approach generally employs somewhat less teacher-oriented structure in terms of classroom activities and somewhat more student-directed selection of activities and materials. The two remaining models, 3 and 4, were utilized only slightly in B.U.S.D. They each place a much broader emphasis on student determination of materials and activities.

e) The prevailing instructional approach utilized by the particular B.U.S.D. schools and programs was that of the traditional approach. Only four B.U.S.D. schools or programs (Grizzley Peak, Early Learning Center, John Muir Learning Center, and Franklin ESP) achieved mean I-Scores above the individualization cut-off point. Moreover, none of these schools exceeded 26 points although 40 I-Scale points are possible. Although the Evaluation Study did not examine the I-Scores achieved by particular teachers, it was clear that some teachers within the district were utilizing an instructional approach within the 30 to 40 point range. Individualization to this degree was, however, rare.

f) The most popular instructional models employed by the various B.U.S.D. schools were Models 5 and 1, the Non-Individualized and the Active, Teacher-Directed approaches, respectively. If popularity of a Model is inferred by selection of the model by over 50% of the teachers at a school, then Model 5 is preferred by eleven of the thirty-three B.U.S.D. schools and Model 1 by ten. Only two B.U.S.D. schools preferred Model 2, the Responsive, Individualization approach. Models 3 and 4, the permissive individualization approaches, were not prevalent in any of the B.U.S.D. schools.

g) The classes within the ESP and Non-ESP schools and programs, if compared in a general way, utilized essentially the same degree of individualized teaching. Both of these general entities also tended to utilize Model 5 in about one-third of their classes. But, the ESP schools tended to use the other three individualized models to a somewhat greater degree than did Non-ESP schools. Model 5, the Non-Individualized model, was used by more than one-half of the Non-ESP classes and by well over one-third of the ESP classes. Thus, preference for this traditional approach was greater in the Non-ESP schools.

h) The Non-ESP grade groupings individualized their teaching more at the lower grades and became progressively more traditional in the higher grade groupings. This trend mirrored that of B.U.S.D. in general. However, a striking difference was revealed for ESP grade groupings where the two elementary groupings had relatively high frequencies of individualized teaching, but where the junior high grades were exceedingly traditional. The high school grades were less individualized than the elementary grades, yet considerably more so than junior high school grades or the Non-ESP high school grades.

i) In both ESP and Non-ESP, the popularity of Model 5, the Non-Individualized approach increased steadily across the grade levels until it was the prevalent model for the high school grade grouping. The first three individualized models were all used with more frequency in ESP than in Non-ESP. Model 4, the most permissive of all instructional models was found more frequently, though not often, in Non-ESP. ESP and Non-ESP utilization of instructional models were most divergent in the upper elementary and the upper secondary grade groupings. In the former, ESP adopted 2 more than 1 and Non-ESP did the reverse. In the high school grades, ESP tended to use 5 less and 1 more than did the Non-ESP counterparts.

j) Classes using the Non-Individualized model of instruction, 5, also received the lowest average I-Scores of any of the five models. The other four models were linked to progressively higher I-Scores which ranged eighteen for 1 to twenty-four for 4.

- Teacher Report of Individualization-Results -- The final four items of Part II of the Teacher Survey, addressed several classroom practices that are generally viewed as requisite to the diagnostic-prescriptive form of individualized teaching. Specifically, the first of these items inquired if evaluation was based on work samples and anecdotal reports, if the evaluation instruments were developed in the teacher's classroom, if evaluation instruments were developed within the school, and/or if standardized or commerial instruments were used. Second, teachers were asked to indicate if classroom activities related to general educational goals rather than being linked to specific instructional objectives, if all pupils in the class have the same instructional objectives, if pupils in a subgroup share the same learning objectives which vary from those of other subgroups, and/or if individual pupils have different instructional objectives. Third, teachers were asked to indicate if student records include only letter grades or similar indices of student skills, if student records include documentation of progress in general class objectives, and/or if extensive records are kept which document pupil progress on specific skills. Finally, teachers were asked to indicate if individual pupils are frequently diagnosed for skill and knowledge as a contingency for the instructional decisions made about the pupil's instruction, if diagnosis of this type is focused on groups of pupils, and/or if instructional decisions are not based on pupil diagnosis.

The distribution of first preference responses provided to these items by the total aggregate of B.U.S.D. teachers is displayed in Table 94. Of the 485 basic skill teachers in B.U.S.D., 360 (74%) returned the Teacher Survey. The data in Table 66 reflect the responses in the 355 (73%) surveys which were amenable to analysis.

Teacher responses to the question concerning evaluation procedures were significantly different than they would have been on the basis of chance alone ($x^2(3\&8) = 88.47$, $p < .005$). Teachers indicated that the first two alternatives were utilized with nearly equal frequency. Thus, student evaluation procedures in the B.U.S.D. are most often based upon work samples and anecdotal reports (36%) and/or instruments developed within the classroom (39%). With respect to the designation of instructional objectives almost half of the B.U.S.D. teachers (49 %) indicated that different instructional objectives are set for individual pupils. Over a quarter of the B.U.S.D. teachers (28 %) indicated that different instructional objectives are

Table 94. Frequency and Percent of Highest Preference Response per Item Category for all B.U.S.D. Basic Skills

Item #	N	Response A		Response B		Response C		Response D		No Response	
		n	%N	n	%N	n	%N	n	%N	n	%N
29. Evaluation Procedures	345	124	36	133	39	29	8.4	59	17.1	10	3
30. Instructional Objectives	336	20	6	57	17	95	28	164	49	19	5
31. Record Keeping about Pupil Progress	344	84	24	117	34	143	42			11	3
32. Pupil Diagnosis	339	204	60	119	35	16	5			16	5

[1] F (

[2] F (

[3] F (

[4] F (

N = Total number of responses per item
n = Total number of item responses per response category

Item 29 Responses:	A) Work samples and anecdotes; B) Developed in classroom; C) Developed in school; D) Standardized or Commercial
Item 30 Responses:	A) General educational goals; B) Same objectives for all students; C) Different objectives for subgroups; D) Different objectives for individuals
Item 31 Responses:	A) Letter grades; B) General class objectives; C) Specific skills
Item 32 Responses:	A) Individual diagnosis and decision; B) Group diagnosis and decision; D) Decision not based on diagnosis

set for separate subgroups of pupils. Nearly a quarter of the teachers (23 %) also indicated that it is most typical for all pupils in a class to have the same instructional objectives or that classroom activities are based on general educational goals rather than specific instructional objectives. The distribution of teacher responses differed significantly from chance $(x^2(3df) = 133.07, p < .005)$.

Regarding the maintenance of pupil-progress records, 42% of the teachers reported that, they most typically kept extensive records to document the progress of students on specific skills. The documentation of pupil progress in general class objectives constituted the most typical record keeping procedure for 34% of B.U.S.D. teachers, while 24% most typically recorded student progress via letter grades or similar indices. The distribution of choices for this inquiry also differed reliably more than would be expected from chance $(x^2(3df) = 15.25, p < .005)$.

The most typical approach to pupil diagnosis, as reported by 60% of B.U.S.D. teachers consists of frequent diagnosis of individual pupils for the purpose of making instructional decisions about the pupil. A substantial proportion of B.U.S.D. teachers (35%) reported that diagnosis and instructional decisions are most typically performed for groups of students rather than for individual students. Teacher responses are not attributable to random selection of response categories (x^2 (2df) - 156.87, $p < .005$).

The analysis of reported evaluation procedures on a grade level basis (Table 95) revealed that the various grade levels and special grade combinations differed significantly (x^2(57df) = 97.2091, p = .007). Inspection of the percentage of first-preference responses given by the teachers of each grade or grade combination reveals several patterns. There is a somewhat greater tendency for teachers of the earlier grades (41 %) to report that they typically base student evaluation on work samples and anecdotal reports than is true at the secondary level (25 %). However, a relatively large portion of the teachers of special grade combinations (51 %) utilized work samples and anecdotal reports for these purposes. The second response alternative, which specified classroom-developed evaluation instruments, was also popularly chosen by B.U.S.D. teachers Table 95 shows that this procedure was more typical of secondary teachers (60 %) than of teachers of regular elementary (28 %) grades or of teachers of special elementary grade combinations (22 %). Approximately a quarter of all teachers utilized the remaining two evaluation procedures (i.e., using either school-developed or standardized commercial instruments). Approximately the same portion

Table 95. Frequency and Percent of Highest Preference Response per Item 29 Category for B.U.S.D. Grade Levels

Item # 29 Evaluation Procedures	N	Response A		Response B		Response C		Response D		No Response	
		n	%N	n	%N	n	%N	n	%N	n	%N
Kindergarten	26	12	46	7	27	1	4	6	23		
First	15	8	53	1	7	0	0	6	40		
Second	18	8	44	2	11	3	17	5	28		
Third	22	7	32	6	27	2	9	7	32		
Fourth	26	8	31	10	39	2	8	6	23		
Fifth	21	11	52	7	33	1	5	2	10		
Sixth	24	8	33	9	38	2	8	5	21		
Math	28	6	21	16	57	5	18	1	4		
English	43	15	35	23	54	2	5	3	7		
Social Studies	33	7	21	23	70	2	6	1	3		
Science	24	4	17	15	63	2	8	3	13		
Kindergarten-First	15	10	67	3	20	1	7	1	7		
Kindergarten-Second	3	1	33	1	33	1	33	0	0		
Kindergarten-Third	3	2	67	0	0	1	33	0	0		
First-Second	9	4	44	1	11	1	11	3	33		
First-Third	3	2	67	0	0	1	33	0	0		
Second-Third	22	6	27	7	32	2	9	7	32		
Fourth-Fifth	3	2	67	1	33	0	0	0	0		
Fourth-Sixth	3	2	67	0	0	0	0	1	33		
Fifth-Sixth	4	1	25	1	25	0	0	2	50		
TOTAL	345	124	36	133	39	29	8	59	17		

x^2 (57df) = 97.2091, p < .0007

N = Total number of responses per item
n = Total number of item responses per response category

Item 29 Responses: A) Work samples and anecdotes; B) Developed in classroom; C) Developed in school; D) Standardized or commercial of teachers in regular elementary grades (32 %), secondary subjects (38 %), and special grade combinations (32 %), reported these procedures to be typical.

Table 96 presents the first-preference responses of teachers at each grade level with respect to the designation of instructional objectives. For the most popular responses (i.e., objectives for individual students), the teachers of regular elementary grades (48 %) and special grade combinations (71 %) were more inclined to report this procedure than were teachers of secondary grades (31 %). For the practice of designating objectives for subgroups of students (the second most popular practice), it was found that this was more prominent in regular elementary (41 %) than in the special combination grades (25 %) or at the secondary level (13 %). The remaining two response alternatives (the use of general educational goals, and the use of the same instructional objectives for all students) were both more popular with secondary teachers (12 % and 39 %, respectively; 51 % combined).

Table 96. Frequency and Percent of Highest Preference Response per Item 30 Category for B.U.S.D. Grade Level

Item # 30 Instructional Objectives	N	Response A		Response B		Response C		Response D		No Response	
		n	%N	n	%N	n	%N	n	%N	n	%N
Kindergarten	26	1	4	1	4	6	23	18	69		
First	16	0	0	4	25	3	19	5	56		
Second	18	0	0	0	0	11	61	7	39		
Third	21	0	0	1	5	12	57	8	38		
Fourth	25	2	8	1	4	12	48	10	40		
Fifth	21	0	0	2	10	6	29	13	62		
Sixth	26	1	4	1	4	12	46	12	46		
Math	26	3	12	12	40	4	15	7	27		
English	40	1	3	12	30	6	15	21	53		
Social Studies	26	5	19	9	35	3	12	9	35		
Science	23	5	22	12	52	3	13	3	13		
Kindergarten-First	16	0	0	0	0	1	6	15	94		
Kindergarten-Second	3	0	0	0	0	2	67	1	33		
Kindergarten-Third	3	0	0	0	0	0	0	3	100		
First-Second	10	0	0	0	0	3	30	7	70		
First-Third	3	0	0	0	0	1	33	2	67		
Second-Third	22	1	5	1	5	7	32	13	59		
Fourth-Fifth	3	0	0	0	0	1	33	2	67		
Fourth-Sixth	3	0	0	1	33	1	33	1	33		
Fifth-Sixth	5	1	20	0	0	1	20	3	60		
TOTAL	333	20	6	57	17	95	28	164	49		

x^2 (57df) = 149.9010, p = .000

N = Total number of responses per item
n = Total number of item responses per response category

Item 30 Responses: A) General education goals; B) Same objectives for all students; C) Different objectives for subgroups; D) Different objectives for individuals than with either regular elementary teachers (3 % and 7 %, respectively; 9 % combined) or special grade combination teachers (3 % and 3 %, respectively; 6 % combined).

The most highly preferred description of typical record keeping procedures specified extensive records of pupil progress on specific skills. Table 97 illustrates how record keeping procedures were practiced at each B.U.S.D. grade level. According to these data, this form of record keeping was much more prevalent for regular elementary grades (63 %) and for the special grade combinations (40 %), than it was for the secondary subject areas (16 %). The use of records indicative of progress in general class objectives, which was cited as typical by over a third of the B.U.S.D. teachers, was more popular for the special grade combinations (55 %) than for either regular elementary grades (28 %) or secondary subjects (31 %). For the least popular practice in which record keeping consisted only of letter grades, there was a strikingly greater inclination for secondary teachers to find this procedure typical (53 %) than there was for either regular (9 %), or special combination (5 %) grades at the elementary level.

Table 97. Frequency and Percent of Highest Preference Response per Item 31 Category for B.U.S.D. Grade Levels

Item # 31 Record Keeping about Pupil Progress	N	Response A		Response B		Response C		Response D		No Response	
		n	%N	n	%N	n	%N	n	%N	n	%N
Kindergarten	27	0	0	6	22	21	78				
First	16	1	6	4	25	11	69				
Second	17	0	0	7	41	10	59				
Third	22	2	9	7	32	13	59				
Fourth	24	4	17	4	17	16	67				
Fifth	21	2	10	7	33	12	57				
Sixth	24	4	17	8	33	12	50				
Math	29	15	52	8	28	6	21				
English	42	15	36	18	43	9	22				
Social Studies	32	21	66	7	22	4	13				
Science	23	16	70	6	26	1	4				
Kindergarten-First	16	1	6	8	50	7	44				
Kindergarten-Second	3	0	0	1	33	2	67				
Kindergarten-Third	3	0	0	3	100	0	0				
First-Second	10	0	0	5	50	5	50				
First-Third	3	1	33	0	0	2	67				
Second-Third	21	1	5	11	52	9	43				
Fourth-Fifth	3	0	0	2	67	1	33				
Fourth-Sixth	3	0	0	3	100	0	0				
Fifth-Sixth	3	0	0	3	100	0	0				
TOTAL	344	84	24	117	34	143	42				

x^2 (38df) = 146.8076, $p < .000$

N = Total number of responses per item

n = Total number of item responses per response category

Item 31 Responses: A) Letter grades; B) General class objectives; C) Specific skills

The final item of the Teacher Survey, Part II inquired about pupil diagnosis and the role of diagnosis in instructional decisions. The most frequently preferred response alternative depicted the situation where the diagnosis of individual students was frequent and important to instructional decisions. Table 98 shows how typical this and the other alternatives were for the various F.U.S.D. grade levels. It can be seen that the frequent and decision rendering form of pupil diagnosis was most typical of regular elementary grades (69 %) and special grade combinations (70 %) but was also used with much frequency at the secondary level (44 %). The second most often adopted approach consisted of periodic diagnosis of groups of pupils and the use of these diagnoses in only some of the instructional decisions about pupils. The secondary grades reported utilizing this approach somewhat more often (46 %) than did the regular elementary grades (30 %) or the special elementary grade combinations (27 %). Very few teachers in any grade reported that instructional decisions were typically not based on pupil diagnosis (elementary, 1 %; secondary, 8 %; special grade combinations, 3 %).

The response differences between grade levels that were delineated above, for items 29 to 30 of the Teacher Survey, Part II, are also apparent from the analyses of grade groupings (Tables 99, 100, 101,102).

Table 98. Frequency and Percent of Highest Preference Response per Item 32 Category for B.U.S.D. Grade Levels

Item # 32 Pupil Diagnosis	N	Response A		Response B		Response C		Response D		No Response	
		n	%N	n	%N	n	%N	n	%N	n	%N
Kindergarten	26	21	81	5	19	0	0				
First	16	15	94	1	6	0	0				
Second	18	11	61	7	39	0	0				
Third	22	16	73	6	27	0	0				
Fourth	25	16	64	8	32	1	4				
Fifth	19	12	63	7	37	0	0				
Sixth	26	14	54	11	42	1	4				
Math	26	13	50	11	42	2	8				
English	41	22	54	17	42	2	5				
Social Studies	32	11	34	17	53	2	13				
Science	22	7	32	11	50	4	18				
Kindergarten-First	16	12	75	4	25	0	0				
Kindergarten-Second	3	2	67	1	33	0	0				
Kindergarten-Third	3	1	33	2	67	0	0				
First-Second	10	9	90	1	10	0	0				
First-Third	3	2	67	1	33	0	0				
Second-Third	21	16	76	5	24	0	0				
Fourth-Fifth	3	0	0	1	33	2	67				
Fourth-Sixth	2	1	50	1	50	0	0				
Fifth-Sixth	5	3	60	2	40	0	0				
TOTAL	339	204	60	119	35	16	5				

x^2 (38df) = 79.1661, $p < .0001$

N = Total number of responses per item
n = Total number of item responses per response category

Item 32 Responses: A) Individual diagnosis and decision; B) Group Diagnosis and decision;
C) Decision not based on diagnosis

Table 99. Frequency and Percent of Highest Preference Response per Item 29 Category for B.U.S.D. Grade Groupings

Item # 29 Evaluation Procedures	N	Response A		Response B		Response C		Response D		No Response	
		n	%N	n	%N	n	%N	n	%N	n	%N
Kindergarten-Third	136	60	44	28	21	13	10	35	26		
Fourth-Sixth	81	32	40	28	35	5	6	16	20		
Seventh-Ninth	68	17	25	42	62	5	7	4	[illegible]		
Tenth-Twelfth	60	15	25	35	58	6	10	4	7		
TOTAL	345	124	36	133	39	29	8	59	17		

x^2 (9df) = 50.4443, $p < .0000$

N = Total number of responses per item
n = Total number of item responses per response category

Item 29 Responses: A) Work samples and anecdotes; B) Developed in classroom; C) Developed in school; D) Standardized or commercial

Table 100. Frequency and Percent of Highest Preference Response per Item 30 Category for B.U.S.D. Grade Groupings

Item # 30 Instructional Objectives	N	Response A		Response B		Response C		Response D		No Response	
		n	%N	n	%N	n	%N	n	%N	n	%N
Kindergarten-Third	138	2	1	7	5	46	33	83	60		
Fourth-Sixth	83	4	5	5	6	33	40	41	49		
Seventh-Ninth	60	8	13	21	35	11	18	20	33		
Tenth-Twelfth	55	6	11	24	44	5	9	20	36		
TOTAL	336	20	6	57	17	95	28	164	49		

x^2 (9df) = 87.2760, $p < .0000$

N = Total number of responses per item
n = Total number of item responses per response category

Item 30 Responses: A) General education goals; B) Same objectives for all students; C) Different objectives for subgroups; D) Different objectives for individuals

Table 101. Frequency and Percent of Highest Preference Response per Item 31 Category for B.U.S.D. Grade Groupings

Item # 31 Record Keeping about Pupil Progress	N	Response A		Response B		Response C		Response D		No Response	
		n	%N	n	%N	n	%N	n	%N	n	%N
Kindergarten-Third	138	6	4	52	38	80	58				
Fourth-Sixth	80	11	14	26	33	43	54				
Seventh-Ninth	66	35	53	20	30	11	17				
Tenth-Twelfth	60	84	53	19	32	9	15				
TOTAL	344	84	24	117	34	143	42				

x^2 (6df) = 101.9493, p < .0000

N = Total number of responses per item
n = Total number of item responses per response category

Item 31 Responses: A) Letter grades; B) General class objectives; C) Specific skills

Table 102. Frequency and Percent of Highest Preference Response per Item 32 Category for B.U.S.D. Grade Groupings

Item # 32 Pupil Diagnosis	N	Response A		Response B		Response C		Response D		No Response	
		n	%N	n	%N	n	%N	n	%N	n	%N
Kindergarten-Third	138	105	76	33	24	0	0				
Fourth-Sixth	80	46	58	30	38	4	5				
Seventh-Ninth	65	31	48	28	43	6	9				
Tenth-Twelfth	56	22	39	28	50	6	11				
TOTAL	339	204	60	119	35	16	2				

x^2 (6df) = 35.0088, $p < .0000$

N = Total number of responses per item
n = Total number of item responses per response category

Item 32 Responses: A) Individual diagnosis and decision; B) Group Diagnosis and decision;
C) Decision not based on diagnosis

For each of these items, the differences between the responses of teachers representing the various grade groupings were statistically significant. In terms of evaluation procedures, response selection was distinguishably different between grade groupings ($x^2(9df) = 50.4443$, $p < .0000$) particularly as a function of elementary or secondary grade level. Elementary grade groupings reported using work samples and anecdotal reports more frequently as the basis of evaluation whereas evaluation for secondary grade groupings was largely typified by the usage of classroom-developed instruments. Commercial and standardized tests were more typically utilized in the elementary grade groupings.

The difference between grade groupings relevant to the designation of instructional objectives was also reliably different ($x^2(9df) = 87.2760$, $p < .0000$). Although a substantial number of teachers in all grade groupings reported the designation of instructional objectives for individual students to be typical, this practice was more frequent at the elementary level, particularly for Kindergarten through Third grades. The elementary grade groupings also reported a higher incidence of subgroup-specific objectives than did either of the secondary subgroups. The use of a single objective for all pupils in a class, while typifying practices in a substantial portion of classes in the two secondary grade groupings, was a very unpopular practice in both of the elementary grade groupings. Similarly, the use of general educational goals rather than specific instructional objectives typified more classes in the two secondary grade groupings than it did in the elementary grade groupings.

The data for record keeping about pupil progress also revealed distinct and reliable differences between grade groupings ($x^2(6df) = 101.9493$, $p < .0000$). As shown in Table 101, extensive records on specific student skills were more typically kept by the elementary grade groupings while letter grades were the more typical form of record keeping for the secondary grade groupings. Records from pupil progress on general class objectives were the most typical mode for approximately a third of the teachers from all four grade groupings.

Regarding pupil diagnosis and instructional decision making, Table 102 reflects the differences between grade groupings ($x^2(6df) = 35.0088$, $p < .0000$). It can be seen that the two elementary grade groupings, particularly the Kindergarten through Third grade grouping, are much more prone to perform and rely upon individual pupil diagnosis than are teachers at the secondary grade groupings. Conversely, secondary groupings reported more frequently, that periodic diagnosis with partial input into instructional decisions were typical. More teachers from the secondary grade groupings reported that it was typical for instructional decisions to not be based on pupil diagnosis.

The analysis of responses to items 29 through 32 of the Teacher Survey, Part II for ESP and Non-ESP teachers did not reveal statistically reliable differences for these two groups of teachers (Table 103). The results merely reflected the same responses as described above for the aggregate of all B.U.S.D. teachers.

● ● Teacher Report of Individualization-Discussion -- In general, B.U.S.D. teachers indicated that the most typical classroom practices relevant to the type of evaluation instrument, the specificity of instructional objectives, record keeping about specific pupil progress, and the performance and utilization of student diagnosis were those which are most individualized. The evaluation instruments were usually student and/or teacher developed. Instructional objectives were usually set either for individual pupils or at least for subgroups within the class. Only slightly less than half of the teachers reported that they had been keeping extensive records on pupil progress in specific skills. The majority of teachers were diagnosing students for specific skills and knowledge, at least at the subgroup level and more often at the individual level. These diagnoses were being considered seriously in

Table 103. Frequency and Percent of Highest Preference Response per Item Category for ESP and Non-ESP Teachers

Item #		N	Response A		Response B		Response C		Response D		No Response	
			n	%N	n	%N	n	%N	n	%N	n	%N
29. Evaluation Procedures	ESP	71	27	38	29	41	4	6	11	16		
	$\overline{\text{ESP}}$	274	97	35	104	38	25	9	48	18		
30. Instructional Objectives	ESP	68	2	3	11	16	19	28	36	53		
	$\overline{\text{ESP}}$	268	18	7	46	17	76	28	128	48		
31. Record Keeping about Pupil Progress	ESP	72	18	25	30	42	24	33				
	$\overline{\text{ESP}}$	272	66	24	87	32	119	44				
32. Pupil Diagnosis	ESP	73	45	62	25	34	3	4				
	$\overline{\text{ESP}}$	266	159	60	94	35	13	5				

[1] x^2 (3df) = 1.1828, p = .76

[2] x^2 (3df) = 1.6313, p = .65

[3] x^2 (2df) = 3.0675, p = .22

[4] x^2 (2df) = 0.1261, p = .93

N = Total number of responses per item
n = Total number of item responses per response category

Item 29 Responses:	A) Work samples and anecdotes; B) Developed in classroom; C) Developed in school; D) Standardized or Commercial
Item 30 Responses:	A) General educational goals; B) Same objectives for all students; C) Different objectives for subgroups; D) Different objectives for individuals
Item 31 Responses:	A) Letter grades; B) General class objectives; C) Specific skills
Item 32 Responses;	A) Individual diagnosis and decision; B) Group diagnosis and decision; C) Decision not based on diagnosis

instructional decisions. The latter finding on pupil diagnosis and instructional decisions is interesting in view of the results pertaining to record keeping. Apparently, an abundance of evaluation instruments or devices have been developed and used in the B.U.S.D. to diagnose pupil progress. However, the maintenance of records on specific pupil progress has not quite kept pace though nearly half of the teachers have done so. This discrepancy would suggest the need for a better understanding about why teachers either cannot or choose not to maintain these records. Perhaps some teachers have found methods other than record keeping which permit them to profitably use the results of the diagnostic procedures employed. Perhaps there is a need for teachers to share their methods of keeping pupil progress records or to participate in the development or selection of effective record keeping techniques.

For each of these four items, the more highly individualized practices were reported to be typical somewhat more frequently by teachers of elementary grades and grade groupings than by teachers of the secondary level. In the first instance, this reflected the fact that work samples and anecdotal reports were utilized more often by elementary teachers and that secondary teachers were very much inclined to use instruments developed in the class. Both of these procedures are relatively highly individualized. About a third of both elementary and secondary teacher groups were reliant upon standardized or commercially available evaluation instruments.

One of the most salient indicators of the differences between teachers of varying grade levels occurred with respect to setting instructional objectives. While teachers in the elementary grade groupings were making prominant use of the practice of setting student-specific instructional objectives, secondary level teachers appear to have been depending much more on more global, non-specific types of instructional objectives. A similar pattern occurred with respect to record keeping of student progress. Elementary teachers were more prone to record individual progress in specific skills and class objectives whereas secondary teachers tended to rely more upon letter grades or their equivalents. Almost paradoxically, secondary teachers reported a high frequency of individual and group diagnosis which contributed to instructional decisions. Elementary teachers also reported that decision relevant pupil diagnosis was typical. These latter results would perhaps raise the question about what *diagnosis* connotes to different persons.

The current study has produced several findings to the effect that a substantially greater degree of individualized teaching occurred at the elementary level than at the secondary level. It is very important that this information be interpreted with caution. It is proper to conclude that secondary teachers make less use of student-specific instructional objectives and that the progress of secondary students is more typically gauged in letter grades than in units indicative of progress in discrete skills. But neither the reasons behind these practices nor their association with student outcomes are known. The Impact Study of the B.U.S.D. Evaluation Study will provide some limited information on the association between individualized teaching and student achievement. However, the limited number of secondary schools and the small number of individualizing teachers in these schools will prevent a full exploration of the association. Since there are no available data in B.U.S.D. which can explain why secondary teachers tend to prefer the more traditional approaches, perhaps the various participants of public education in Berkeley will consider examining the relative merits of the teaching practices discussed above for the educational process at both the elementary and the secondary levels.

1) Conclusions -- The final four items of the Teacher Survey, Part II addressed several teaching practices which have relevance to the nature and extent of

individualized teaching undertaken in B.U.S.D. The following conclusions are warranted:

a) Individualized alternatives were most often indicated to be typical by all B.U.S.D. teachers in the areas of evaluation instruments, the selection of instructional objectives, the maintenance of records indicative of pupil progress, and diagnostic-prescriptive procedures.

b) Half of the B.U.S.D. teachers reported that setting different instructional objectives for individual children was typical. The remaining teachers were equally divided between the practice of setting different objectives for different subgroups or the more non-specific practice of either setting the same objectives for the whole class or simply relying upon general educational goals.

c) There was a gradient of response for record-keeping practices which indicated that somewhat less than half of all B.U.S.D. teachers recorded skill-specific progress, a third documented progress on general class objectives, and a quarter recorded only letter grades or their equivalent.

d) A majority of the B.U.S.D. teachers reported that diagnosing the skills of individuals and/or groups of pupils for the purpose of aiding instructional decisions was typical. Only 5% reported that instructional decisions were not based on pupil diagnosis.

e) Elementary grade teachers reported the more highly individualized approaches to be typical more often than did secondary grade teachers.

f) Work samples and anecdotal reports were utilized more often by elementary than secondary teachers.

g) Secondary teachers more often reported that evaluation instruments developed in their classes were the typical evaluation tool.

h) About 1/3 of all teachers reported that pupil progress was typically evaluated via standardized or commercially available instruments.

i) Individual instructional objectives were typically set in a large proportion of classes at both elementary and secondary levels. This practice was more prominent than any other mode of instructional objective determination at the elementary level. However, approximately half of the secondary teachers reported the typical use of general educational goals or the same instructional objective for all students in a class.

j) The majority of elementary grade teachers kept student progress records on either specific skills or general class objectives. Over half of the secondary teachers relied upon letter grades alone and approximately another third typically kept records of general class objectives.

k) The vast majority of all B.U.S.D. teachers, regardless of grade level reported the diagnosis of student skills for decisions about pupil instruction.

l) Teachers in ESP and Non-ESP programs did not differ in their reports of the type of evaluation instruments used, the selection of instructional objectives, the maintenance of records indicative of pupil progress, and diagnostic-prescriptive procedures.

• The Open Classroom Approach

• • The Teacher Survey, Part II (DISC)-Results -- The Dimensions of Schooling Questionnaire (DISC), developed by the Ontario Institute for Studies in Education, was used as Part II of the Teacher Survey (Appendix I). The instrument is based upon the conception that open education is characterized by school programs which maximize student choice in all dimensions of schooling. Contained within the 28 DISC items are inquiries about educational practices relevant to both individualized and traditional forms of the teaching. The DISC was included in the Teacher Survey because open educational practices are advocated by some B.U.S.D. schools and staff, because it represents an important current in contemporary instructional options, and because the dimensions of schooling probed in the DISC are extant in any instructional method. It is important to understand from the outset that the association between open education (i.e., the DISC score) and student outcomes is not clearly understood. Thus, the magnitude of the DISC score cannot be interpreted as an index of teaching effectiveness per se.

Each of the 28 DISC items was scored according to a double weighted formula developed by the instrument's authors (Fisher, 1975). The score for each separate item ranged from 0.0 to 1.0 with the reported degree of classroom *openness* increasing with progressively higher score values. All 28 items are summed to obtain the total DISC score which may range from 0.0 for a totally closed set of educational practices to 28.0 for a totally open set of educational practices. Open classroom practices may occur with equal ease in either an open or a partitioned architectural setting (Traub, Weiss, Fisher, Musella, 1972).

Table 104 presents the mean scores for the aggregate of all B.U.S.D. teachers. The mean total DISC score for B.U.S.D. teachers was 13.18. Also listed in Table 104 are the mean scores of all teachers for each DISC item. Item scores ranged from a low (i.e., the most closed) of .25 to a high (i.e., the most open) of .84. Figure 15 illustrates the interval frequency of DISC scores of various magnitudes. It can be seen that the item scores fell into two general ranges. Of the 28 DISC items, 14 items ranged in value from .25 to .50, while 11 of the items ranged from .55 to .65 and a single item attained .84.

Tables 105 and 106 list items receiving the five most open and the five most closed scores from the entire set of teacher respondents. The presentation of mean scores for all 28 DISC items in Table 107 shows that a number of other items could also be considered very open or very closed. The upper and lower five items were selected to exempli-

Table 104. Mean and Standard Deviation per DISC Item for all Returned Surveys

ITEM	M	SD	n	%N	No Response
1. Assignment of Teachers to Students	.41	.26	335	94	20
2. Age and Ability Range	.28	.27	322	91	33
3. Time Scheduling	.25	.20	338	95	17
4. Free Time	.28	.18	333	94	22
5. Rule Making	.29	.21	336	95	19
6. Rule Enforcing	.30	.12	345	97	10
7. Defining General Objectives	.25	.19	342	96	13
8. Defining Instructional Objectives	.34	.19	340	96	15
9. Development of Materials	.61	.26	348	98	7
10. Selection of Materials	.45	.24	338	95	17
11. Students' Mobility	.37	.23	344	97	11
12. Flexibility of Environment	.57	.12	344	97	11
13. Learning Environment	.35	.18	345	97	10
14. Student Pacing	.27	.27	346	97	9
15. Independent Study Time	.57	.27	310	87	45
16. Student Interaction	.84	.16	347	98	8
17. Formulating Approaches to Learning	.42	.24	309	87	46
18. Peer Group Assistance	.58	.26	343	97	12
19. Other Adult Involvement	.55	.33	351	99	4
20. Cooperative Planning and Teaching	.64	.28	349	98	6
21. Media Usage	.30	.22	344	97	11
22. Teacher Focus	.49	.23	339	95	16
23. Teacher Role	.32	.24	340	96	15
24. Subgrouping Criteria	.62	.22	334	94	21
25. Subgrouping Stability	.59	.20	322	91	33
26. Evaluation Focus	.60	.30	343	97	12
27. Timing of Evaluation	.73	.22	350	99	5
28. Student Role in Evaluation	.60	.17	321	90	34
All Items	13.18	2.10	355		

N = Total number of DISC's scored

n = Total number of responses per item 486

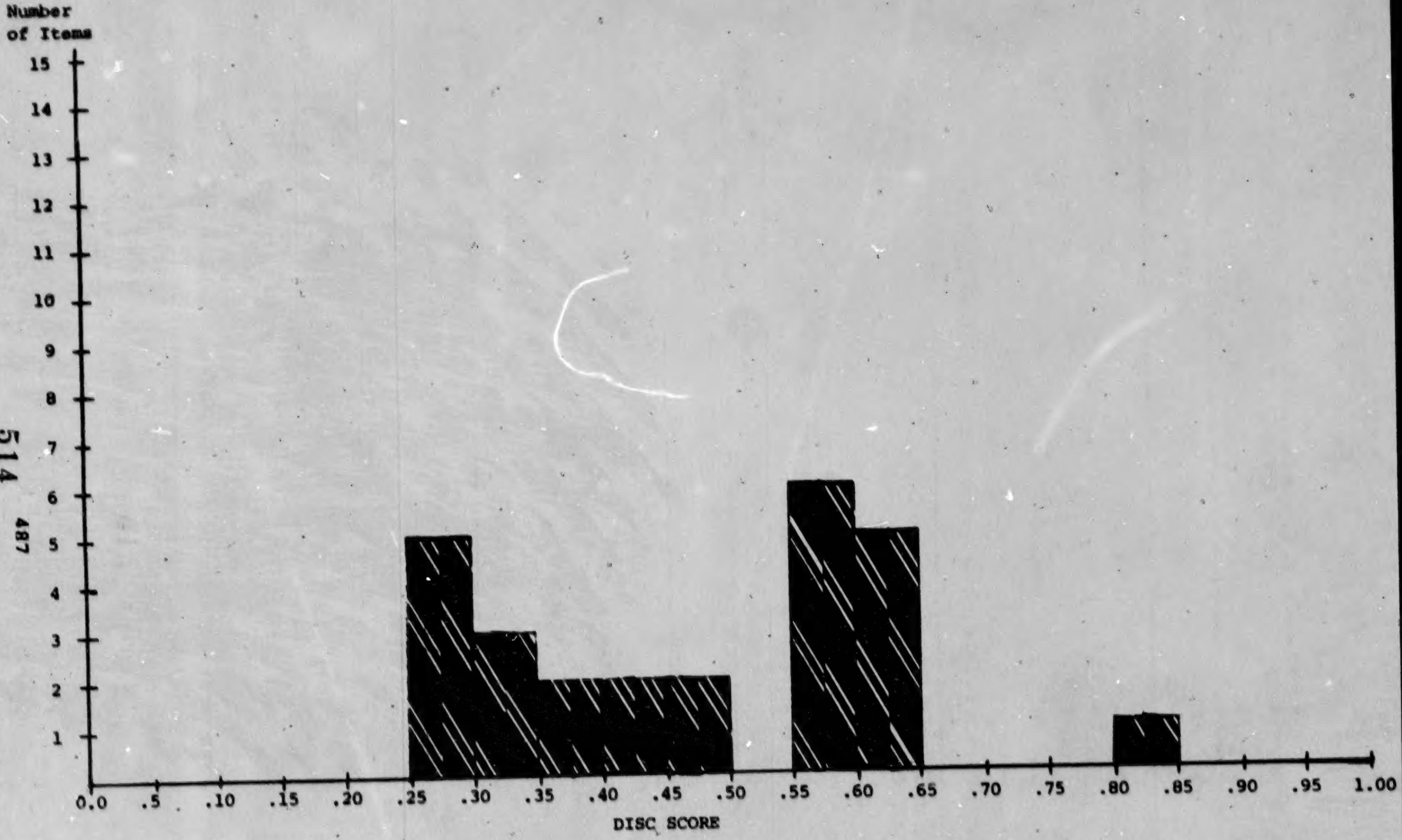

Figure 15. Interval Frequency of DISC Item Scores

Table 105. Five Most Open (Highest) DISC Items for all Teacher Survey Respondents

Item	M	SD	n	%N
16. Student Interaction	.84	.16	347	
27. Timing of Evaluation	.73	.22	350	
20. Cooperative Planning and Teaching	.64	.28	349	
24. Subgrouping Criteria	.62	.22	334	
9. Development of Materials	.61	.26	348	

n = Total number of responses per item
N - Total number of DISC items scored

Table 106. Five Most Closed (Lowest) DISC Items for all Teacher Survey Respondents

Item	M	SD	n	%N
3. Time Scheduling	.25	.20	338	
7. Defining General Objectives	.25	.19	342	
2. Age and Ability Range	.28	.27	322	
4. Free Time	.28	.18	333	
5. Rule Making	.29	.21	336	

n = Total number of responses per item
N = Total number of DISC items scored

Table 107. DISC Scores per Item for each B.U.S.D. Grade Group

ITEM	K-3			4- 6			7-9			10-12			F	
	M	SD	n	M	SD	n	M	SD	n	M	SD	n	df	ratio
1. Assignment of Teachers to Students	.31	.17	136	.30	.17	79	.47	.28	62	.72	.26	58	3,331	61.6552
2. Age and Ability Range	.27	.26	139	.14	.20	77	.22	.28	52	.53	.24	54	3,318	27.5392
3. Time Scheduling	.30	.18	140	.20	.19	81	.19	.18	61	.25	.23	56	3,334	7.0586
4. Free Time	.34	.16	139	.25	.13	78	.23	.20	63	.19	.19	53	3,329	13.8345
5. Rule Making	.32	.18	138	.28	.22	80	.24	.20	61	.28	.23	57	3,332	2.0812*
6. Rule Enforcement	.34	.09	140	.32	.09	82	.25	.14	64	.23	.17	59	3,341	17.4382
7. Defining General Objectives	.24	.19	137	.25	.19	82	.26	.19	63	.26	.22	60	3,338	.3848*
8. Defining Instructional Objectives	.27	.20	134	.32	.18	82	.41	.15	64	.46	.17	60	3,336	18.7717
9. Development of Materials	.62	.24	141	.62	.26	80	.59	.27	65	.59	.30	62	3,344	.3170*
10. Selection of Materials	.52	.17	135	.45	.18	81	.40	.29	65	.32	.31	57	3,334	11.5727
11. Students' Mobility	.38	.22	136	.39	.20	84	.31	.19	64	.37	.32	60	3,340	1.9436*
12. Flexibility of Environment	.57	.07	138	.60	.08	82	.57	.11	65	.54	.21	59	3,340	3.1565
13. Learning Environment	.41	.13	139	.33	.16	83	.28	.21	64	.30	.22	59	3,341	11.0654
14. Student Pacing	.67	.17	141	.55	.19	82	.47	.30	66	.34	.35	57	3,342	29.2571
15. Independent Study Time	.61	.24	113	.66	.21	82	.46	.28	57	.44	.30	58	3,306	12.5957
16. Student Interaction	.88	.13	139	.82	.17	83	.76	.18	65	.87	.16	60	3,343	9.9310
17. Formulating Approaches to Learning	.42	.22	112	.40	.25	80	.40	.22	62	.47	.26	55	3,305	1.3143*
18. Peer Group Assistance	.61	.25	135	.61	.26	83	.54	.25	66	.53	.27	59	3,339	2.062 *
19. Other Adult Involvement	.76	.25	140	.46	.31	83	.35	.28	67	.41	.30	61	3,347	47.0164
20. Cooperative Planning and Teaching	.69	.25	139	.61	.32	83	.60	.30	67	.63	.28	60	3,345	2.0889*
21. Media Usage	.32	.22	140	.29	.21	83	.27	.21	63	.29	.27	58	3,340	0.7329*
22. Teacher Focus	.60	.17	133	.50	.19	82	.41	.24	65	.36	.26	59	3,335	23.1795
23. Teacher Role	.34	.22	135	.31	.23	79	.31	.27	67	.30	.27	59	3,336	0.4783*
24. Subgrouping Criteria	.61	.17	140	.57	.17	79	.61	.26	61	.74	.28	54	3,330	7.8827
25. Subgrouping Stability	.59	.15	136	.54	.19	81	.60	.23	54	.68	.26	51	3,318	5.9088
26. Evaluation Focus	.62	.32	138	.66	.31	81	.57	.26	65	.52	.28	59	3,339	2.7610
27. Timing of Evaluation	.82	.17	139	.73	.22	84	.69	.18	68	.56	.25	59	3,346	24.7180
28. Student Role in Evaluation	.58	.19	122	.60	.16	80	.62	.13	65	.63	.15	54	3,317	1.3799*
TOTAL	14.04	2.17	141	12.82	1.88	84	12.16	2.59	68	12.83	3.03	62	3,351	11.54

*Nonsignificant at the .05 probability level fy the trends present in the DISC results.

The item pertaining to student interaction received the most open rating by far (.84). In effect, teachers reported that they provided opportunities in their class for students to interact with or exchange ideas with one another as a regular part of learning. The second most open procedure involved the timing of student evaluation (.75). Teachers indicated that evaluation occurred frequently, perhaps daily or several times during a unit of work. Also receiving a highly open score was the item dealing with cooperative planning and teaching (.64). As implied, B.U.S.D. teachers reported a high degree of cooperative planning, teaching, and information sharing among one another. The criteria used in the development of classroom subgroups was also rated by B.U.S.D. teachers as constituting a highly open practice (.62). Accordingly, the formation of subgroups was very often based upon the students' own critera such as interest or friendship or was done by the teacher on the basis of similar types of information about individual students. In rating the development of materials as a highly open practice in B.U.S.D. schools (.61), teachers indicated that there is a great deal of teacher and student involvement in this process. Most materials in use were either created, adapted, or selected by teachers, students, or parents.

The five items receiving the most closed DISC scores (Table 106) ranged from .25 to .29. The most closed item (.25) concerned the amount of class time blocked into scheduled activities. Teachers indicated that class time is almost entirely allocated to organized activities which occur according to some pre-arranged timetable. Therefore, a minimum amount of class time is devoted to activities dictated by more spontaneous teacher or student interests. Receiving an equally closed rating from teachers was the practice concerning the determination of general schooling objectives (.25). Teachers reported that the general educational goals and objectives of B.U.S.D. tended to be primarily determined by central authority persons such as the school board, central administrative staff, or site administrators. Consequently, teachers did not view teachers, parents, and students as playing a salient role in these determinations. With respect to the assignment of students to classes, B.U.S.D. teachers reported the relatively closed practice (.28) of using age as the primary criterion. The amount of free time which students were customarily given for the pursuit of their own interests (i.e., as opposed to prescribed or independent work on required projects) was also considered by teachers to reflect closed educational practices (.28). Teachers reported that very little free time was made available to students during the school day for these purposes. Finally, the determination of rules for student behavior received one of the five most closed teacher ratings (.29), thus indicating that these rules were usually made by administrators or teachers rather than by parents and students.

The mean score for each DISC item that was accrued by B.U.S.D. teachers in the various grade groupings are listed in Table 107. The item scores representative of each of the grade groupings varied from one another at a statistically reliable level for 18 of the 28 DISC items (Table 107). The mean total DISC scores for the various grade groupings were statistically different ($F(3,351) = 11.54$, $p < .01$). In the case of a number of DISC items and the total DISC score, the Kindergarten through Third grade grouping reflected a somewhat more open instructional approach than did the other three grade groupings (e.g., Time Scheduling ($F(3,334) = 7.0586$, $p < .01$); Free Time ($F(3,329) = 13.834$, $p < .01$); Rule Enforcement ($F(3,341) = 17.438$, $p < .01$); Selection of Materials ($F(3,334) = 11.5729$, $p < .01$); Student Pacing ($F(3,342) = 29.2571$, $p < .01$); Other Adult Involvement ($F(3,347) = 47.0164$, $p < .01$); Teacher Focus ($F(3,335) = 23.1795$, $p < .01$); Evaluation Focus ($F(3,339) = 2.7610$, $p < .05$); Timing of Evaluation ($F(3,346) = 24.7180$, $p < .01$). In most instances the differences were not only in favor of more openness at the early elementary grades, but also reflective of a gradient in degree of openness between the earliest grade grouping to the latest.

The inverse of the above pattern was also true for some items in the sense that the Tenth through Twelfth grade grouping achieved higher DISC scores (e.g., Assignment of Teachers to Students ($F(3,331) = 61.6552, p < .01$); Age and Ability Range ($F(3,318) = 27.539, p < .01$); Defining Instructional Objectives ($F(3,336) = 18.7717, p < .01$); Subgrouping Criteria ($F(3,330) = 7.8827, p < .01$); Subgrouping Stability ($F(3,318) = 5.9088, p < .01$).

In addition to the differences between grade groupings on the DISC items, there were also notable similarities. An examiniation of the five most open and five most closed DISC items, as rated by each grade grouping (Table 108 and 109), discloses that in several instances there was a general trend toward openness and closedness with respect to several dimensions of schooling. The item concerned with opportunities for learning-oriented interactions between students was among the most open dimensions of schooling for all four grade groupings. Similarly, cooperative planning and teaching practices were described as highly open for all four groups (the Sixth most open for Fourth through Sixth grades), and the utilization of frequent student evaluation (a highly open practice) was typical for all but the

Table 108. Five Most Open (Highest) DISC Items for B.U.S.D. Grade Groupings

ITEM	M	SD	n	%N
Kindergarten - Third				
16. Student Interaction	.88	.13	139	
27. Timing of Evaluation	.82	.17	139	
19. Other Adult Involvement	.76	.25	140	
20. Cooperative Planning and Teaching	.69	.24	139	
14. Student Pacing	.67	.17	141	
Fourth - Sixth				
16. Student Interaction	.82	.17	83	
27. Timing of Evaluation	.73	.22	84	
15. Independent Study Time	.66	.21	82	
26. Evaluation Focus	.66	.31	81	
9. Development of Materials	.62	.26	80	
Seventh - Ninth				
16. Student Interaction	.76	.18	65	
27. Timing of Evaluation	.69	.18	68	
28. Student Role in Evaluation	.62	.13	65	
24. Subgrouping Criteria	.61	.26	61	
20. Cooperative Planning and Teaching	.60	.30	67	
25. Subgrouping Stability	.60	.23	54	
Tenth - Twelfth				
16. Student Interaction	.87	.16	60	
24. Subgrouping Criteria	.74	.28	54	
1. Assignment of Teachers to Students	.72	.26	58	
25. Subgrouping Stability	.68	.26	51	
20. Cooperative Planning and Teaching	.63	.28	60	
28. Student Role in Evaluation	.63	.15	54	

n = Total number of responses per item
N = Total number of DISC items scored

Table 109. Five Most Closed (Lowest) DISC Items for B.U.S.D. Grade Groupings

ITEM	M	SD	n	#N
Kindergarten - Third				
7. Defining General Objectives	.24	.19	137	
2. Age and Ability Range	.27	.26	139	
8. Defining Instructional Objectives	.27	.20	134	
3. Time Scheduling	.30	.18	140	
4. Free Time	.34	.16	139	
Fourth - Sixth				
2. Age and Ability Range	.14	.20	77	
3. Time Scheduling	.20	.19	81	
4. Free Time	.25	.13	78	
7. Defining General Objectives	.25	.19	82	
5. Rule Making	.28	.22	80	
21. Media Usage	.29	.21	83	
Seventh - Ninth				
3. Time Scheduling	.19	.18	61	
2. Age and Ability Range	.22	.28	52	
4. Free Time	.23	.20	63	
5. Rule Making	.24	.20	61	
6. Rule Enforcement	.25	.14	64	
Tenth - Twelfth				
4. Free Time	.19	.19	53	
6. Rule Enforcement	.23	.17	59	
3. Time Scheduling	.25	.23	56	
7. Defining General Objectives	.26	.22	60	
5. Rule Making	.28	.23	57	

n = Total number of responses per item
N = Total number of DISC items scored

high school grade grouping. An active student role in evaluation on student determination in subgrouping criteria and stability were all typical of both secondary grade groupings.

Similarities between grade groupings were also evident among the dimensions of schooling which received the lowest or most closed DISC scores. All four grade groupings reported student determination to be atypical in the areas of class time scheduling, free time, and the definition of general educational objectives. With respect to class assignment as a function of age or ability range, all but the high school grade grouping determined this to be a highly closed practice in which willful student determination played a minimum role. There was also agreement between the two secondary grade groupings that rule enforcement was an area where administrators and teachers were given more prerogatives than were parents and students.

The total DISC scores of individual grades, subject areas, and special grade combinations differed significantly from one another ($F(19,335) = 3.7552$, $p < .01$). Secondary mathematics teachers indicated that their implementation of the 28 dimensions of schooling was the most closed of all grades or subjects (11.31). The Kindergarten through Third special grade combination, with 3 teachers, attained the highest total DISC

Table 110. Total Mean DISC Score for each School

SCHOOL	M	SD	N
Cragmont	12.84	2.31	13
Emerson	13.02	1.09	14
Grizzly Peak	13.46	1.03	5
Hillside	14.70	1.00	10
John Muir	12.25	2.33	3
LeConte	12.87	1.94	10
Oxford	14.91	1.09	5
Thousand Oaks	13.49	1.89	21
Tilden	13.75	1.21	3
Washington	15.54**	1.37	15
Whittier	14.54	1.68	7
Early Learning Center	18.85**	3.36	2
John Muir Child Development	16.60**	2.15	15
Kilimanjaro	---	---	--
Columbus	12.69	1.49	15
Franklin	11.77*	1.76	17
Longfellow	12.39	1.79	25
Malcolm X	13.99	1.67	20
Jefferson	12.79	1.60	18
Franklin ESP	13.25	1.52	5
Malcolm X ESP	15.35**	3.01	2
King Junior High	11.98*	2.95	22
West Campus			
Willard Junior High	11.87*	2.30	20
Berkeley High	11.95*	3.06	40
Odyssey	13.89	1.02	2
West Campus ESP			
Agora-Genesis	13.63	1.49	4
Berkeley College Prep	12.34	.02	2
Model A	13.66	3.04	4
On-Target	12.30	.53	2
School of the Arts	14.97	.00	1
East Campus	15.98**	1.90	9

F (30,324) = 4.9904, $p < .01$

* One of four lowest DISC Scores

** One of five highest DISC Scores

score (18.33). Of the grades with a larger number of teachers, Kindergarten also attained a relatively high DISC score (14.61).

The scores for each DISC item were analyzed separately as a function of elementary grades, secondary subject areas, and special grade combinations. These data and the associated analysis are presented in Tables 1 through 29 of Appendix I. As can be seen from an item by item inspection of the grade level results, the data contained within these tables are in general accord with the findings cited above for grade groupings. In addition, the variability between particular grade levels and grade combinations may be observed for each item.

The mean total DISC score attained by each B.U.S.D. school and program ranged from a low of 11.77 for Franklin School to a high of 18.85 for the Early Learning Center (Table 111). The difference between the total mean scores of all schools was reliably different ($F(30,324) = 4.9904$, $p < .01$). Among other schools with low DISC scores was Willard Junior High, Berkeley High School, and King Junior High School. Other schools attaining relatively high DISC scores were John Muir Child Development, East Campus, Washington, and Malcolm X ESP. An item by item inspection of the DISC results for the various schools identifies the specific nature of variability among schools on each

Table 111. Mean DISC Scores for all ESP and Non-ESP Respondents

Program	M	SD	n
ESP	14.35	2.49	74
NON-ESP	12.87	2.37	281

$F\ (1,353) = 22.1102,\ p < .01$

n = Total number of responses per program of the 28 dimensions of schooling probed by the DISC (Tables 30 to 57 of Appendix I).

Tables 111 and 112 display the relative DISC scores for ESP and Non-ESP teachers for each DISC item and for the total sum of DISC items. The mean overall DISC score for ESP teachers was 14.35 which was significantly higher ($F(1,353) = 22.11$, $p < .01$) than was the mean DISC score of 12.87 attained by Non-ESP teachers.

A review of Table 112 shows that reliable differences existed between ESP and Non-ESP groups on 10 of the DISC items. ESP obtained a reliably higher DISC score on Time Scheduling ($F(1,336) = 13.89$, $p < .01$), indicating that classroom activities in ESP tend to be more unscheduled and thus more at the discretion of students' and teachers' interests than is true of activities in Non-ESP programs. ESP obtained a significantly higher DISC score on Free Time than did Non-ESP programs ($F(1,331) = 8.71$, $p < .01$). This indicates that in ESP programs as opposed to Non-ESP programs there was more free time given to students to pursue their own interests (free time does not refer to independent work on assigned or project work). ESP obtained a significantly higher DISC score on Defining General Objectives than did Non-ESP programs ($F(1,340) = 16.56$). This difference demonstrates that ESP programs extended more of a role to students, parents, and teachers in planning general objectives than did Non-ESP programs. ESP programs showed a statistical-

Table 112. Mean DISC Scores per Item for all ESP and Non-ESP Teachers

Item #		n	%N	Mean	SD	F	No Response
1. Assignment of Teachers to Students	ESP	65		.46	.27	F (1,333) = 3.2782 $p > .05$, $p < .05 = 3.84$	
	$\overline{\text{ESP}}$	270		.40	.26		
2. Age & Ability Range	ESP	62		.33	.32	F (1,320) = 2.6692 $p > .05$, $p < .05 = 3.84$	
	$\overline{\text{ESP}}$	260		.26	.26		
3. Time Scheduling	ESP	65		.33	.22	F (1,336) = 13.8882 $p < .01$	
	$\overline{\text{ESP}}$	273		.23	.19		
4. Free Time	ESP	65		.33	.19	F (1,331) = 8.7070 $p < .01$	
	$\overline{\text{ESP}}$	268		.26	.17		
5. Rule Making	ESP	69		.30	.18	F (1,334) = 0.1187 $p > .05$, $p < .05 = 3.84$	
	$\overline{\text{ESP}}$	267		.29	.21		
6. Rule Enforcement	ESP	72		.29	.11	F (1,343) = 0.9973 $p > .05$, $p < .05 = 3.84$	
	$\overline{\text{ESP}}$	273		.30	.13		
7. Defining General Objectives	ESP	72		.33	.20	F (1,340) = 16.5664 $p < .01$	
	$\overline{\text{ESP}}$	270		.23	.19		

Table 112. Mean DISC Scores per Item for all ESP and Non-ESP Teachers (continued)

Item #		n	%N	Mean	SD	F	No Response
8. Defining Instructional Objectives	ESP	67		.39	.20	F (1,338) = 4.1210 $p < .05$	
	$\overline{\text{ESP}}$	273		.33	.19		
9. Development of Materials	ESP	73		.66	.23	F (1,346 = 4.0861 $p < .05$	
	$\overline{\text{ESP}}$	275		.59	.26		
10. Selection of Materials	ESP	67		.46	.26	F (1,336) = 0.4115 $P > .05$, $p < .05 = 3.84$	
	$\overline{\text{ESP}}$	271		.44	.23		
11. Students' Mobility	ESP	69		.44	.26	F (1,342) = 8.4316 $p < .01$	
	$\overline{\text{ESP}}$	275		.35	.22		
12. Flexibility of Environment	ESP	73		.59	.12	F (1,342) = 3.1641 $p > .05$, $p < .05 = 3.84$	
	$\overline{\text{ESP}}$	271		.56	.11		
13. Learning Environment	ESP	67		.37	.18	F (1,343) = 1.9796 $p > .05$, $p < .05 = 3.84$	
	$\overline{\text{ESP}}$	278		.34	.18		
14. Student Pacing	ESP	69		.60	.27	F (1,344) = 2.7670 $p > .05$, $p < .05 = 3.84$	
	$\overline{\text{ESP}}$	277		.54	.26		

Table 112. Mean DISC Scores per Item for all ESP and Non-ESP Teachers (continued)

Item #		n	%N	Mean	SD	F	No Response
15. Independent Study	ESP	63		.59	.26	F (1,308) = 0.7783 p >.05, p <.05 = 3.84	
	$\overline{\text{ESP}}$	247		.56	.27		
16. Student Interaction	ESP	74		.86	.15	F (1,345) = 1.4443 p >.05, p <.05 = 3.84	
	$\overline{\text{ESP}}$	273		.84	.16		
17. Formulating Approaches to Learning	ESP	62		.47	.23	F (1,307) = 2.61 p >.05, p <.05 = 3.84	
	$\overline{\text{ESP}}$	247		.41	.24		
18. Peer Group Assistance	ESP	71		.60	.26	F (1,341) = 0.2884 p >.05, p <.05 = 3.84	
	$\overline{\text{ESP}}$	272		.58	.26		
19. Other Adult Involvement	ESP	73		.64	.29	F (1,349) = 6.9860 p <.01	
	$\overline{\text{ESP}}$	278		.53	.33		
20. Cooperative Planning and Teaching	ESP	73		.69	.26	F (1,347) = 3.1525 p >.05, p <.05 = 3.84	
	$\overline{\text{ESP}}$	276		.63	.29		
21. Media Change	ESP	72		.30	.22	F (1,342) = 0.0021 p >.05, p <.05 = 3.84	
	$\overline{\text{ESP}}$	272		.30	.22		

Table 112. Mean DISC Scores per Item for all ESP and Non-ESP Teachers (continued)

Item #		n	%N	Mean	SD	F	No Response
22. Teacher Focus	ESP	69		.51	.22	F (1,337) = 0.2781 p > .05, p < .05 = 3.84	
	$\overline{\text{ESP}}$	270		.49	.23		
23. Teacher Role	ESP	66		.37	.24	F (1,338) = 4.5584 p < .05	
	$\overline{\text{ESP}}$	274		.31	.24		
24. Subgrouping Criteria	ESP	71		.68	.21	F (1,332) = 8.45 p < .05	
	$\overline{\text{ESP}}$	263		.60	.21		
25. Subgrouping Stability	ESP	67		.66	.19	F (1,320) = 9.6831 p < .05	
	$\overline{\text{ESP}}$	255		.57	.20		
26. Evaluation Focus	ESP	71		.63	.30	F (1,341) = 0.7134 p > .05, p < .05 = 3.84	
	ESP	272		.59	.30		
27. Timing of Evaluation	ESP	70		.24	.24	F (1,348) = 0.0871 p > .05, p < .05 = 3.84	
	$\overline{\text{ESP}}$	280		.73	.22		
28. Student Role in Evaluation	ESP	62		.57	.18	F (1,319) = 3.0133 p > .05, p < .05 = 3.84	
	$\overline{\text{ESP}}$	259		.61	.17		

N = Total number of DISC respondents
n = Total number of item responses per category

ly more open approach to defining instructional objectives (F(1,338) = 4.12, p < .05), i.e., instructional objectives were determined by students, parents, and teachers to a greater extent than they were in Non-ESP programs.

Among the other item differences between ESP and Non-ESP teachers, the teachers in ESP programs demonstrated a reliably higher DISC score than Non-ESP programs for developing materials (F(1,346) = 4.0861, p < .05). Thus, there was greater involvement of teachers and/or students in the ESP programs in developing materials than was true of Non-ESP programs. ESP programs had a higher DISC score in Student Mobility than did Non-ESP programs (F(1,342) = 8.4316, p < .01). Accordingly, students in ESP programs were more free to move in and out of their classrooms for resource areas and the library, etc. than were Non-ESP students. In ESP programs, the DISC score for other adult involvement was significantly higher than in Non-ESP programs. Accordingly, parents, volunteers, and frequent visitors were more often welcomed and involved in the ESP classrooms as an important part of the learning experience.

Of the remaining item differences between ESP and Non-ESP teachers, there was a statistically significant difference between ESP and Non-ESP programs in the DISC score for Teacher Role

($F(1,338) = 4.56$, $p < .05$). The ESP teacher was therefore more likely than was the Non-ESP teacher to act as a resource person for students rather than as a total controller of planned lessons. The ESP teachers were significantly different from $\overline{\text{ESP}}$ teachers on Subgrouping Criteria DISC scores ($F(1,332) = 8.45$, $p < .01$). Thus, in ESP classrooms as opposed to $\overline{\text{ESP}}$ classrooms, students were more likely to group themselves according to their own criteria (e.g., interests, friendships) than by teacher assignment via student attributes or random assignment. The DISC score for subgrouping stability was higher for ESP than for Non-ESP programs ($F(1,320) = 9.68$, $p < .01$). It would therefore be expected that subgroup membership in ESP classes tended to be more fluid than it was in Non-ESP classes where the establishment and duration of subgroups was more fixed.

Several DISC items produced statistically nonsignificant but suggestive differences between ESP and Non-ESP programs. ESP programs had somewhat higher DISC scores for the assignment of teachers to students. The ESP programs were more likely to allow students and parents to determine the assignment of students to teachers ($F(1,333) = 3.28$, $p < .05$, $p < .05 = 3.84$). ESP programs had higher DISC scores in Flexibility of Environment. Therefore, the arrangement of furniture and equipment in ESP learning areas was more likely to be decided upon and changed by students and their teachers. DISC scores for cooperative planning and teaching were higher for ESP than Non-ESP teachers. ESP teachers were more likely to plan and teach together and share information about students ($F(1,347) = 3.15$, $p > .05$, $p < .05 = 3.84$). In ESP programs, the DISC score for Students' Role in Evaluation was higher than that of students in Non-ESP programs ($F(1,319) = 3.01$, $p > .05$, $p < .05 = 3.84$). Therefore, ESP students played a greater role in planning evaluation and using the results for self evaluation purposes.

• • The Teacher Survey, Part II (DISC)-Discussion -- When considered collectively, the B.U.S.D. teachers attained a total DISC Score of 13.18. Relative to the mean scores attained at the highly open validation schools in research performed by the test developers, the B.U.S.D. DISC score was considerably lower. The highly open validation schools attained a mean score of 20.18 while the highly closed validation schools obtained a score of 11.77. Thus, B.U.S.D. teachers reported that their educational practices, as specified in the DISC, were substantially more open than those of the typically closed or typically more traditional practices studied by the test developers. However, practices of B.U.S.D. teachers were far from being extremely open. In fact, no B.U.S.D. school attained a DISC score as high as that typical of the highly open validation schools. Conversely, the most closed B.U.S.D. school had a DISC score which was very similar to that of the closed validation school. A subsequent Canadian research study with 449 teachers in schools featuring both open and traditional architecture produced a mean DISC score of 10.37. It is reasonable to conclude therefore, that the implementation of the 28 dimensions of schooling in B.U.S.D. is proceeding in a manner which is neither highly closed nor highly open, although they appear to be relatively more closed than open.

The five most open dimensions of schooling reported by the entire group of B.U.S.D. teachers consisted of 1) Student Interaction; 2) Timing of Evaluation; 3) Cooperative Planning and Teaching; 4) Subgrouping Criteria; and 5) the Development of Materials. These ratings indicate that of the 28 dimensions of schooling that were examined with the DISC, teachers responded that a high degree of student interaction was permitted as a regular part of learning, that the evaluation of student progress was performed daily or at least several times during a work unit, that there was a high incidence of cooperative planning, teaching and sharing between teachers, that students played an important role in determining the manner in which they were grouped within classrooms, and finally, that teachers and students were actively involved in the development of classroom materials.

B.U.S.D. teachers indicated that the five most closed dimensions of schooling consist of 1) Time Scheduling; 2) the Determination of General Educational Objectives; 3) the determination of classroom assignment by Age and Ability Range; 4) Free Time; and 5) Rule Making. In effect, B.U.S.D. teachers indicated by these ratings that class time was almost fully scheduled according to some prearranged timetable, that the general educational objectives for students were determined primarily by authority figures such as the Board of Education, administrative staff, or site personnel. The composition of classes was based almost entirely upon the age and ability range of students as opposed to the approach in which classes contain a wide variety of ages and qualifications. Very little free time was given to students during the school day to pursue activities stimulated by their own interests. Finally, rules for student conduct were determined primarily by authority figures such as administrative staff and/or teachers. This is in contrast to the practice in open educational situations in which students and parents play a major role in defining the rules for student conduct.

The comparisons for B.U.S.D. grade levels and grade groupings revealed several differences in approach to the dimensions of schooling represented in the DISC. Kindergarten through Third grades reported somewhat more open practices and there was a decreasing tendency for openness as the grade level of the teachers increased. This was true for both the total DISC score and for a number of individual items. For example, the Kindergarten through Third grade teachers were more prone to utilize open practices in the following dimensions of schooling: Time Scheduling, Free Time, Rule Enforcement, Selection of Materials, Student Pacing, Other Adult Involvement, Teacher Focus, Evaluation Focus, and Timing for Evaluation. There were also several differences between the high school teachers and the teachers of all lower grades. The teachers of grades Tenth through Twelfth reported more open educational practices in the following dimensions of schooling: Assignment of Teachers to Students, Age and Ability Range, Defining Instructional Objectives, Subgrouping Criteria, and Subgrouping Stability.

The tendency for increasingly closed practices to be used at progressively higher grade levels received further support from the results showing that secondary mathematics was the most closed of all grade groupings and that the Kindergarten - Third special grade combination and Kindergarten received the most open DISC scores. It is therefore not surprising that three of the four most closed schools were secondary schools and that the most open schools were all elementary schools with the exception of the special continuation secondary school.

In addition to the differences between grade levels cited above, there were also marked tendencies for similarity in the degree of openness employed. A comparison of the most open dimensions of schooling indicated by the various grade groupings revealed a number of these similarities. For instance, all grade groupings reported Student Interaction and Cooperative Planning and Teaching as among the most open dimensions of schooling under consideration. Similarly, Evaluation Timing was rated among the most open of dimensions by teachers in Kindergarten throughout Ninth grade. Secondary teachers of both junior and senior high school levels reported that Student Role in Evaluation, Subgrouping Criteria, and Subgrouping Stability were among the most open of their practices. With respect to the most closed practices, all grade groupings were in agreement that Time Scheduling, Free Time, and Determination of General Objectives were highly typical of this approach and therefore involved a minimum of student determination. The utilization of Age and Ability Range as a determiner of classroom assignment was reported as typical by teachers of grade groupings Kindergarten through Third, Fourth through Sixth, and Seventh through Ninth. Thus, classroom assignment in these grades was typically undertaken in a very closed or traditional manner. Finally, both junior and senior high school teachers reported the methods of Rule

Enforcement to be highly closed.

Comparisons of the ESP and the Non-ESP DISC scores indicated that the overall DISC score for ESP teachers was significantly higher than for Non-ESP teachers. The dimensions of schooling in which ESP teachers were conducting more open educational practices included Time Scheduling, the utilization of Free Time for student determined activities, the Definition of Instructional Objectives, the Development of Materials, Student Mobility, the Involvement of Other Adults, the Role of Teachers, Subgrouping Criteria, and Subgrouping Stability.

The differences in DISC items show that on the average ESP teachers tended to allow more unscheduled classroom time for the pursuit of interests determined by students and teachers and that they permitted students more time for unrequired, self determined activities. ESP teachers tended to extend a larger role to students, parents, and teachers in the planning of general objectives. The students, parents, and teachers in the ESP program had more decision making power regarding instructional objectives and were more likely to use materials which they had helped to develop. Students in ESP programs were more free to move in and out of their classrooms and the library. Parents, volunteers, and frequent visitors were more likely to be welcomed to the ESP classrooms as an important part of the educational experience.

The ESP teacher was more likely to assume the role of the resource person as opposed to that of the mandator of planned lessons. Finally, students in ESP classrooms were more often permitted to determine the composition of their classroom groupings and were given more freedom to alter these groupings. ESP programs tended to be somewhat more permissive regarding the involvement of students and parents in the assignments of teachers to students. The arrangement of furniture and equipment in ESP learning areas was also more likely to be decided upon and changed by students and parents. There was a greater tendency for ESP teachers to plan and teach together and for ESP students to receive a more important role in the planning and utilization of student evaluation.

Non-ESP teachers were more closed and traditional in their implementation of all 28 dimensions of schooling than were ESP teachers.

1) Conclusions -- The results of the DISC led to nine basic conclusions:

    a) Teaching practices in B.U.S.D. are neither extremely closed nor extremely open, but tend to be more closed than open.

    b) The most open dimensions of schooling in B.U.S.D. consist of Student Interaction, the Timing of Evaluation, Cooperative Planning and Teaching, Criteria for Subgrouping, and the Development of Materials.

c) The most closed dimensions of schooling in B.U.S.D. consists of Time Scheduling, the Determination of General Objectives, the Age and Ability Range in classroom composition, Free Time, and Rule Making.

d) There is an inverse relationship between the degree of openness and the grade level. The Kindergarten through Third grade grouping was consistently more open in the following dimensions of schooling: Time Scheduling, Free Time, Rule Enforcement, Selection of Materials, Student Pacing, Other Adult Involvement, Teacher Focus, Evaluation Focus, and Timing of Evaluation.

e) Grades Ten through Twelve were more open than were lower grades on the following dimensions of schooling: Assignment of Teachers to Students, Age and Ability Range, Defining Instructional Objectives, Subgrouping Criteria, and Subgrouping Stability.

g) All grade groupings rated Student Interaction and Cooperative Planning and Teaching as among the most open dimensions of schooling. Evaluation Timing was rated as one of the most open dimensions by Kindergarten through Third, Fourth through Sixth, and Seventh through Ninth grade groupings. Student Role in Evaluation, Subgrouping Criteria, and Subgrouping Stability were all rated as among the most open dimensions for grade groupings Seven through Nine and Ten through Twelve.

h) All grade groupings rated Time Scheduling, free Time, and Determination of General Objectives as among the most closed dimensions of schooling in B.U.S.D. The assignment of students by Age and Ability Range was rated as one of the most highly closed dimensions by grade groupings Kindergarten through Third, Fourth through Sixth, and Seventh through Ninth. Grade groupings Seventh through Ninth and Tenth through Twelfth agreed that Rule Enforcement was one of the most closed dimensions of schooling at those levels.

i) Secondary mathematics was the most closed of all grade levels while the Kindergarten - Third special combination and Kindergarten grade level were the most open. The schools receiving the most closed DISC scores included Franklin, Willard, Berkeley High School, and King Junior High School. Among the most open DISC scores were those obtained by the Early Learning Center, John Muir Child Development, East Campus, Washington, and Malcolm X ESP.

j) ESP teachers were consistently more open in their teaching practices than were Non-ESP teachers. The dimensions of schooling in which ESP teachers reported more open classroom practices consisted of Time Scheduling, Free Time, Defining General Objectives, Defining Instructional Objectives, the Development of Materials, Student Mobility, the Involvement of Other Adults, Teacher Role, Subgrouping Criteria, Subgrouping Stability, Assignment of Teachers to Students, Flexibility of Environment, Cooperative Planning and Teaching, and Student Role in Evaluation. Non-ESP teachers did not exceed ESP teachers in the degree of openness of educational practice on any of the 28 dimensions of schooling.

- **Racial Distributions - Results and Discussion** -- Data on the student racial distribution in B.U.S.D. were collected during the classroom observations from every Kindergarten through Sixth basic skill classroom, and in one class of all secondary Mathematics, English, science, and social studies teachers. The data included the number of Black and Non-Black* students present in the classroom during the observation. At the secondary level, classes in each of the four subject areas were further identified as either regular or remedial.

The racial distribution data was necessary as a check on racial bias in student data emanating from the secondary subject area classes. However, the statistics on race that were provided in B.U.S.D.'s Report on Student Racial Census, Fall 1974, were adequate for the analysis of student data in the elementary grades. Our findings are not statistically different from those recorded in the district's Fall report.

Using the data, a number of questions concerning student racial distribution were raised. Aggregated, the data described the percent of Black and Non-Black students in any number of different instructional settings. Chi Square Tests were used to identify statistically significant differences at the .05 confidence level. The data was organized so that the racial distribution and parity could be analyzed 1) by ESP and Non-ESP Programs; 2) by attendance zones; 3) by school; 4) by grade level; 5) by grade; 6) by subject grouping; and 7) by achievement grouping.

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*The term Non-Black was adopted at the time of the observations to denote in a brief and unambiguous way that observers were to tabulate one figure for all Black children and another for children in all other racial groupings.

Although there are any number of different ways of defining racial parity, we have used the B.U.S.D. definition which is also the one required by State law. Parity is 15% of the group's District level mean distribution. Based on the B.U.S.D. Report on Student Racial Census, Fall 1974, the parity figure for Black Students ranges from 36.9% to 49.9% (i.e., mean number of Black students ± 15%). From these findings emerge several distribution patterns, all of which are relevant to the categories of students listed above. These findings relate to three educationally important topics: desegregation, student turn-over rate, and tracking.

- ● Racial Distribution at Varying Grade Levels -- It is not possible to describe the racial distribution of grades Seven through Twelve because the data were collected by subject area rather than by grade level. For Kindergarten through Sixth grades the percentage of Black students varied as a function of grade. The differences between these grades were statistically significant (Table 113). The figure is lowest at the Kindergarten level where 39.5% of the students are Black. At the

Table 113. Racial Distribution of Black and Non-Black Students by Grade and Grade Grouping

Grade	%*Black	% Non-Black
K	39.5	60.5
1	44.2	55.8
2	44.7	55.3
3	42.8	57.2
4	45.7	54.3
5	50.6	49.4
6	43.9	56.1
K-3	40.5	59.5
4-6	46.8	53.3
7-9	49.9	50.1
10-12	44.5	55.5
Total	44.6	55.4

*% based on 445 classroom observations

Fifth grade it is highest, with Blacks constituting 50.6% of the students. The mean percent of Black students in the entire B.U.S.D. student population is 44.6%. Attendance data suggested that the number of Non-Black students decreased as the grade level decreased. For instance, in October, 1974 there were 439 Black Kindergarteners and 457 Fifth graders. For the same attendance period there were 701 Non-Black children in Kindergarten and 571 in the Fifth grade. Thus, the attendance data for this time period shows 10% more Non-Black Kindergarten students than Fifth graders. Racial parity existed at all grade levels, but the percentage of Blacks was lowest at the Kindergarten through Third level (40.5%, Table 143) and highest at the Seventh through Ninth grade level (45.5%).

At the secondary level where only basic skill classes were observed, the variability in the racial groupings within the subject areas was statistically significant (Figure 16). In the English classes observed, 54.7% of the students were Black. In the mathematic classes, 46% of the students were Black. Black students constituted 49.8% of the students in social science classes, yet they represented only 34.1% of the science classes.

Table 114. Racial Distribution of Black and NonBlack Students in 1974

	Black 1973	Black 1974	Non Black 1973	Non Black 1974
K	464	439	660	701
1	431	399	643	616
2	485	422	636	609
3	509	472	664	619
4	470	458	609	545
5	473	457	629	571
6	486	446	662	582
K-3	1889	1732	2603	2545
4-6	1429	1361	1900	1698
7-9	1466	1419	1677	1804
10-12	1418	1394	1697	1659

ADA - October 1973-74

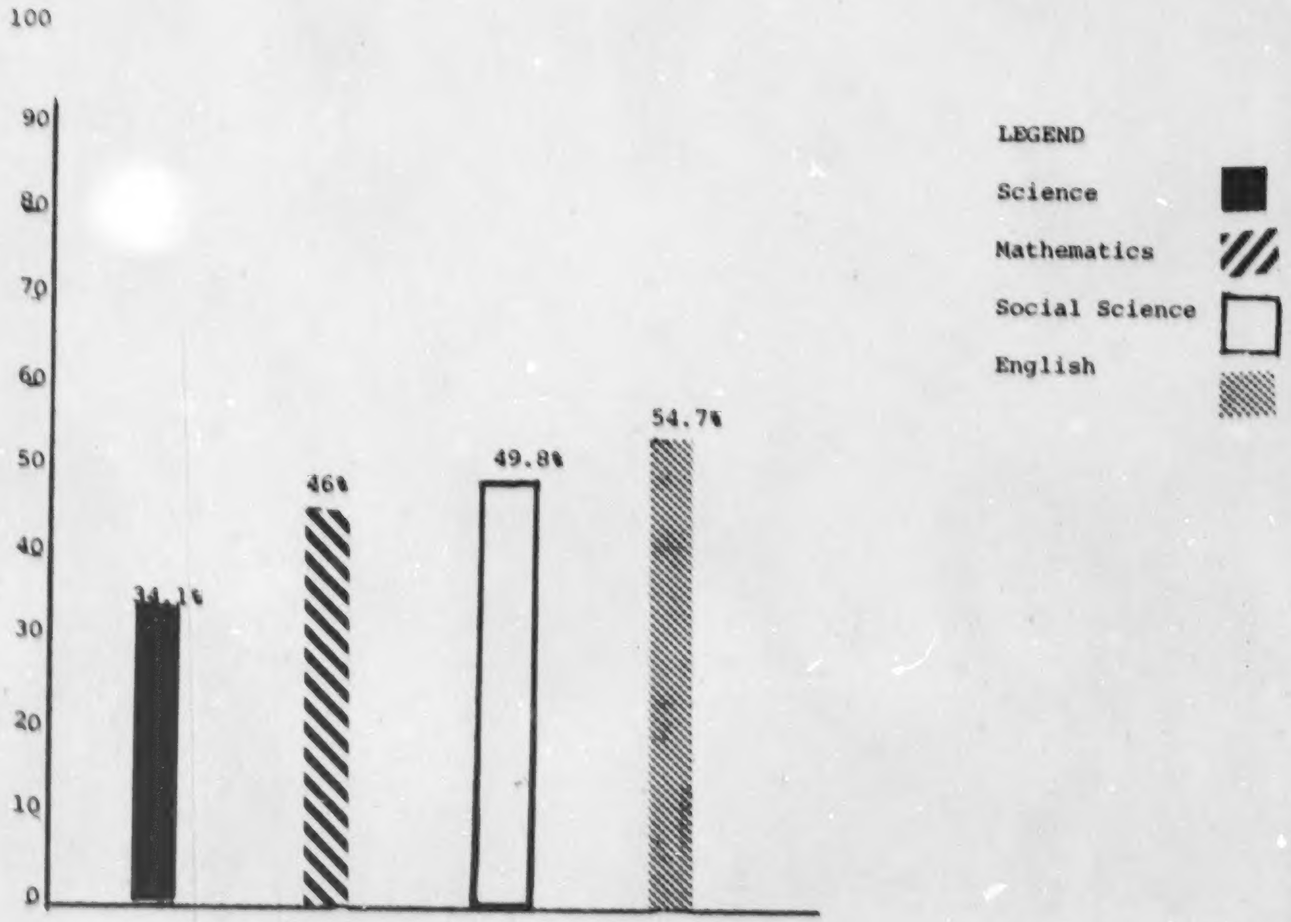

Figure 16. Percentage of Black Students in Secondary Subject Areas

- • Racial Distribution at Varying Schools -- At the site level the differences in percentage of Black students per school was statistically significant and racial parity was attained at very few (Figure 17). Willard had the highest percent of Black students (57.8%) and Kilimanjaro had the lowest percentage of Black students in the District (17.5%). Of the Kindergarten through Third grade schools, Le Conte had the highest representation with 54.6% Blacks while Kilimanjaro had the lowest (17.5%). At the Fourth through Sixth level, Longfellow had a 53.7% Black population and Franklin had the low of 35.8% Black students. There was also a difference in the percentage of Blacks at the two junior high schools. Willard (57.8%) exceeded the percentage of Blacks attending King Junior High School (43.2%). At the senior high level, East Campus had 56.2% Black students, while Berkeley High had just 42.8%

  The racial distributions in the Kindergarten through Third grade schools reflected the racial patterns of the four attendance zones (Figure 18). In each of the four zones there was at least one school where the percentage of Blacks was not consistent with parity. For instance, in zone A Blacks represent less than 36.9% in two of the three school populations. In zone C Blacks exceed parity at one school, and are markedly below it at two other sites. In zone D, Le Conte, having the highest percent of Blacks at the

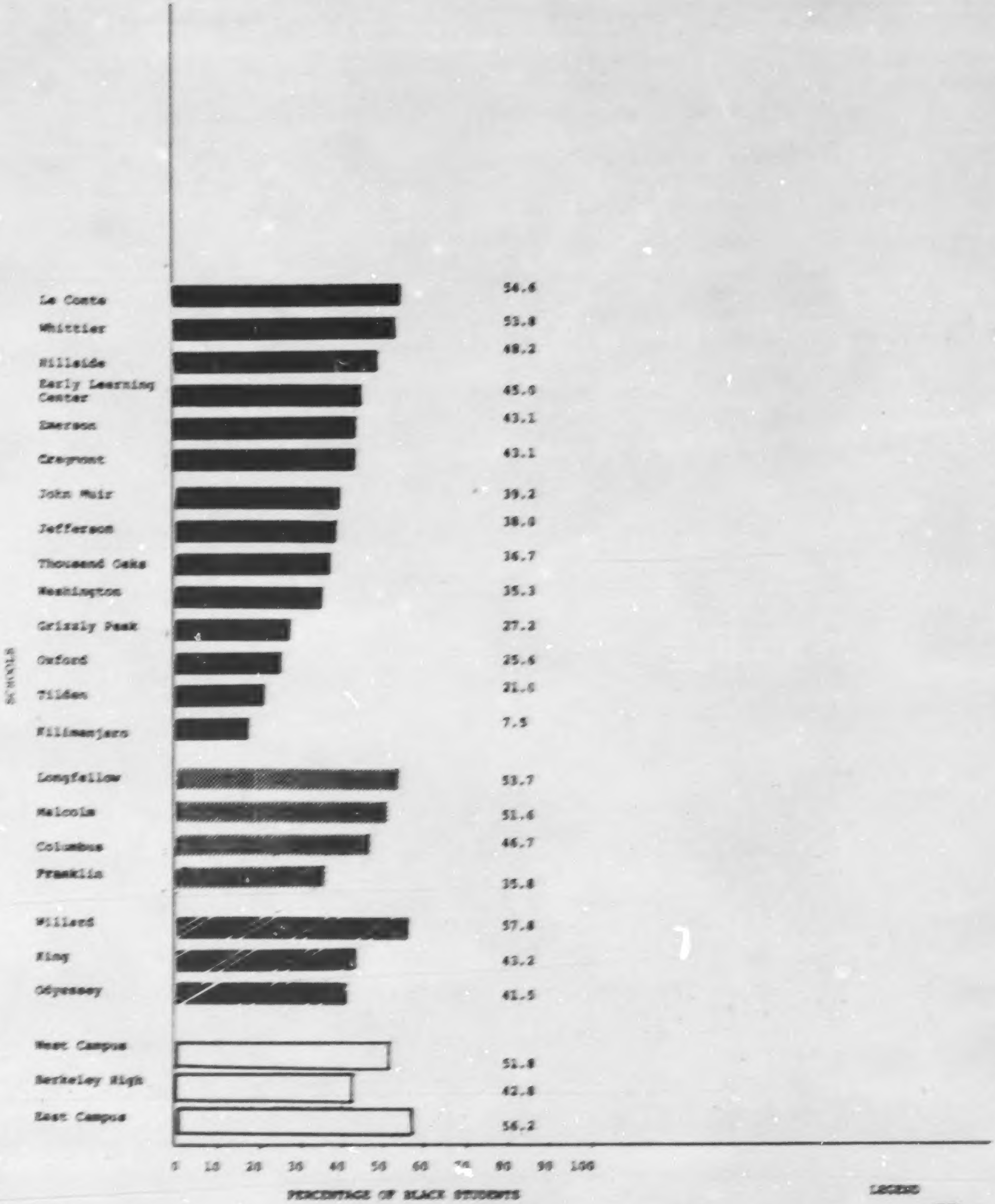

Figure 17. Percentage of Black Students at Various Schools and Grade Levels

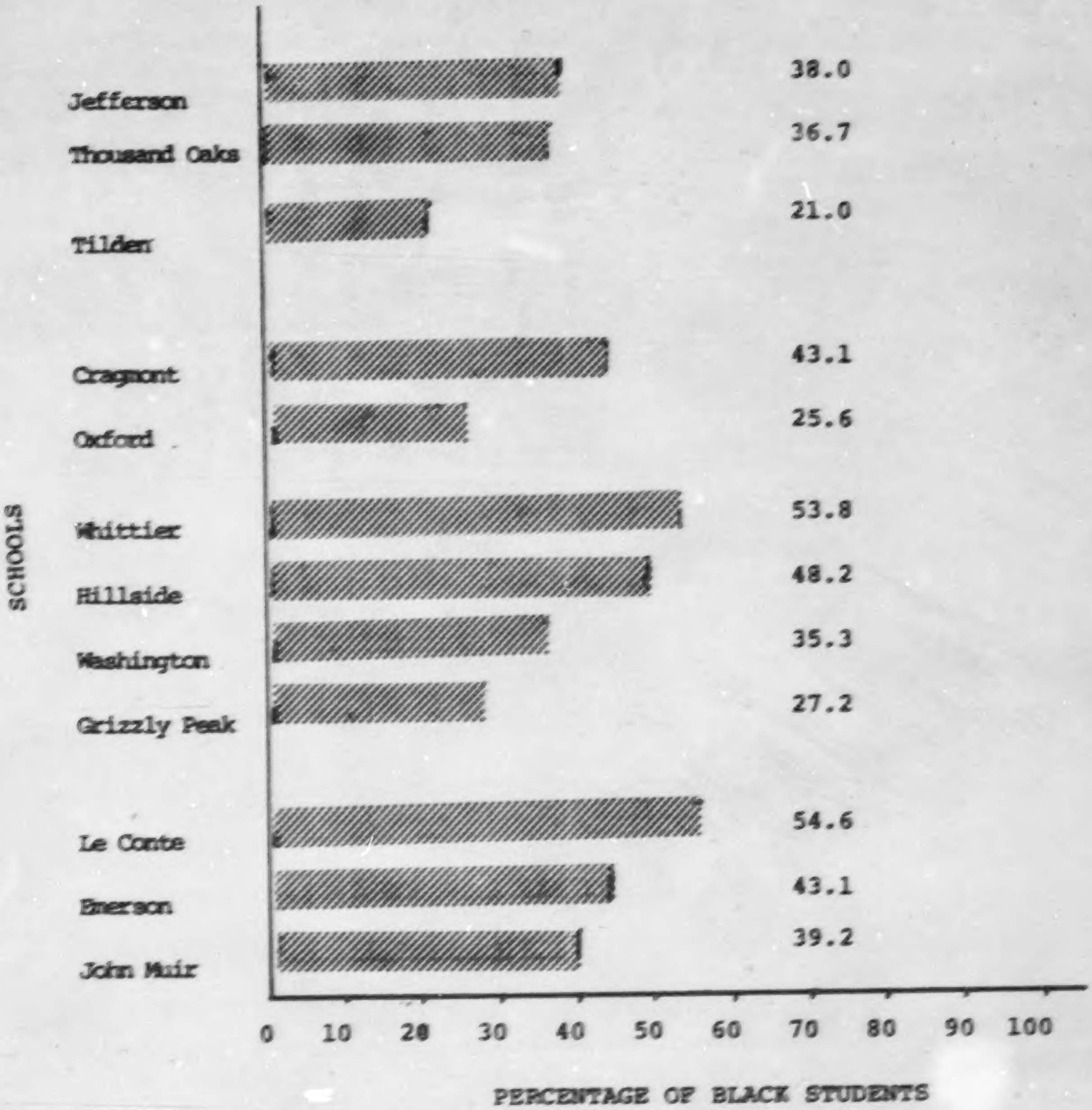

Figure 18. Percentage of Black Students by Schools and Attendance Zones

primary level (56.1%), contrasts with John Muir, where Blacks are slightly less than 39.9%. Emerson, the other school in this zone, with 43.3% Blacks, was the only school effecting racial parity.

• • ESP and Non-ESP Students -- Blacks constituted 43.6% of the Non-ESP population. The difference between the two was not found to be significant (Table 115).

• • Grouping by Achievement -- Homogeneous grouping by achievement scores occurs throughout the secondary level. In the 145 regular classes observed at the secondary level, only 39% of the students in these classes were Black. On the other hand 84.8% of the students observed in the 32 remedial classes were Black (Figure 21).

• • Racial Integration within Classroom Subgroups -- In addition to the more direct measure of classroom integration utilized above, another measure assessing integration within the classroom groups was obtained. The measure identified the number of children in a class that were in homogeneous groups as compared to the number in integrated groups. In this study, homogeneous was defined as not having at least one Black child and one Non-Black child in a group. A one-time measure of this pattern was obtained 20 minutes into the classroom observation period.

Table 115. Racial Distribution of Black and NonBlack Students in ESP and Non-ESP Groups

	Black Percent	NonBlack Percent
ESP	43.6	56.5
Non ESP	44.7	55.3
Total	44.5	55.6

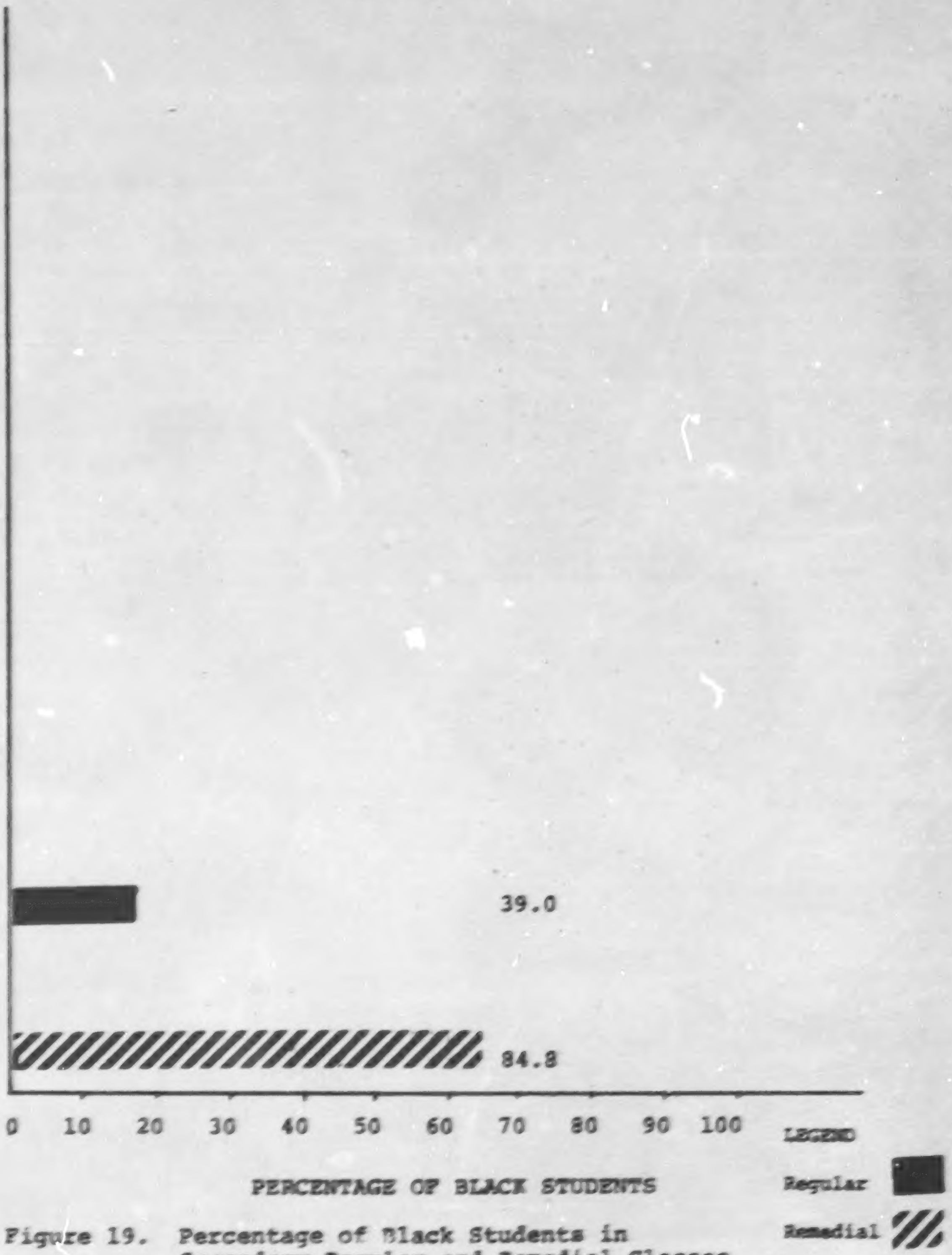

Figure 19. Percentage of Black Students in Secondary Regular and Remedial Classes

Thus, due to this definition, only classes in which grouping was present at the 20 minute interval were included in the data set. Moreover, since the probability that homogeneous groups will occur varies according to the racial makeup of the class, only those classes in which 40-60% of the students were Black were included.

Given this operational definition, the question to be addressed is, "To what extent are groups within B.U.S.D. classes integrated?" The findings indicated that most groups were integrated with only 16.8% of the students found in homogeneous groups. No significant differences were found between ESP and Non-ESP schools or among grade levels. We can therefore conclude that B.U.S.D. teachers do not systematically separate children into groups on the basis of race.

- Conclusions -- The examination of racial distributions in B.U.S.D. produced the following conclusions:

1) Racial distribution, at least to the extent that it refers to racial parity, can be a measure of desegregation. The results on racial distributions in the various school sites indicated that there was variation in the distribution of Black students at the site level. Racial parity was not achieved at thirteen of the twenty-four sites. Even so, it appears that the disproportionate representation of Blacks at all elementary schools is a random pheno-

menon.

2) When organized by zone, the data presented a different picture. Within this framework there emerged a distinct pattern in which at least one Kindergarten through Third grade school in each zone had a disproportionately low percentage of Black students. In fact, with one exception, each zone had at least one school where Blacks constituted less than parity. It is interesting too that in this zone one school was nearly 55% Black. From these data it is quite clear that there is, at a minimum, one school in each zone which has not been effectively desegregated. Even if it is the case that the racial distribution which emerges is not due to design, it is apparent that desegregation has yet to be fully realized at the site level within grades Kindergarten through Six.

3) The observation above is further supported by findings on racial distribution by subject, at the secondary level. Quite obviously tracking had occurred by subject area as well as within subjects at this grade level. Although the data does not indicate how Black students get programmed into the remedial track, it does suggest that the decision is made at the Seventh grade and is thereafter virtually immutable. Longitudinal data would be required to provide definitive explanations about the causes, stability, and results of this

situation. Considering the grave consequences of this practice for the student affected, an investment in the investigation of this problem would definitely be warranted.

Early Childhood Education

Information on the Early Childhood Education (ECE) Program was gathered by interviewing the three supervising teachers and by distributing a questionnaire to ECE teachers. The purpose of these inquiries was to describe the current status of ECE and to identify its strengths and weaknesses. As a result, information was gained on program structure, organizational structure, goals and objectives, components, and assessments by supervisors and staff (Table 116).

- Program Structure -- ECE is divided into major program types which include children's centers, parent nurseries, and a combination of these. The children's centers are full-day custodial and educational programs designed to serve children of working parents. The parent nurseries are part-day (8:45-12:15, 12:15- 3:45) programs for the educational development of children whose parents do not both work full-time. Additionally, the primary campus programs include a combination of services such as after-school and before school care.

- Organizational Structure -- The ECE program is administered by a *troika* of three supervising teachers. They have defined their responsibilities along three levels. Level

Table 116. Distribution of ECE Staff Responses to the ECE Survey

A R E A	CHILDREN'S CENTER			PARENT NURSERY			T O T A L		
	Very good	Adequate	Inadequate	Very good	Adequate	Inadequate	Very good	Adequate	Inadequate
1. Safety	69%	31%		42%	58%		56%	44%	
2. Space	36	36	18	58	25	16	50	33	17
3. Cleanliness	50	43	7	29	64	2	39	53	7
4. Equipment & materials	46	46	7	31	69		38	58	3
5. Educational Programs	86	14		100			93	7	
6. Social Services	43	36	21	69	23	8	55	29	14
7. Health Services	36	50	14	71	21	8	54	36	10
8. Food Services	77	15	8	22	78		54	41	5
9. Parent Involvement	57	43		79	21		68	32	
10. Staff	69	31		100			85	15	
11. Staff Development	62	38		69	31		65	35	

N = 28

I is overall program administration including responsibilities such as State proposal submissions, State and County communications, coordination with B.U.S.D. central administration, and community liason activities. Level II is a coordinative function with the primary school programs and includes consultation and support activities. Primary school programs are administered by the site administrators. Level III is the actual site administration with each supervising teacher responsible for a specific number of children's centers and parent nurseries.

The teaching staff of each center is responsible to their respective supervising teachers. Additionally, a supportive services team composed of two community workers, a health consultant, a guidance worker, a psychologist, and a speech therapist provides services to all of the centers and parent nurseries. The B.U.S.D. Board of Education decided to change this administrative structure next year. The three supervising teachers will be replaced with a project director in charge of ECE, Follow Through and Compensatory Education. This decision was made primarily as a budget-cutting device as well as an intended strategy to improve curriculum articulation.

- Goals and Objectives -- The ECE program has done an excellent job of establishing educational goals and objectives, and using them as guidelines for curriculum and instruction. The ECE goals are identified in a position paper adopted in 1971. The position paper adopts the developmental model for early childhood education. While educational goals are established in this paper, no goals concerning other program components are identified. The goal statement is backed up by an extensive series of behavioral objectives which were developed in 1973. The behavioral objectives were organized to cover the areas of social and personal development, motor coordination, sensory perceptual abilities and cognitive abilities. Within each area, performance objectives were established for varying age ranges. Interviews with the supervising teachers indicated that the teachers use these objectives with reasonable effectiveness to establish their curriculum.

- Program Components and Services -- The educational program is guided by the developmental model and the ECE behavioral objectives. Actual educational activities are planned and implemented by the staff, and include a wide range of activities and strategies. Curriculum includes areas such as group discussion about current events, dramatics, table games, art work, speech, listening, learning the properties of things, reading activities and measurement. Teaching strategies vary among the sites.

For example, at King Childrens' Center, each teacher is responsible for a skill area and children move on a monthly basis from teacher to teacher. In contrast, at West Berkeley a teacher and two assistant teachers are responsible for 15 children on a continual basis.

The curriculum stresses individualization and individual diagnosis is viewed as an important part of the program. To this end, supervisor and staff conferences are held often in order to assess the progress and needs of individual children. Overall curriculum plans are primarily developed at monthly staff meetings, and are refined on a daily basis in view of child, parent, and environmental input.

Affective and social development are an integral part of the program and are stressed through a variety of activities and strategies including peer interactions, environmental experiences, teacher observation and listening, and through the treatment of the child and family as a total unit.

Parent involvement is a major aspect of the program, particularly in the parent nurseries where weekly participation is required as part of the parents' enrollment in Adult Education. Parent involvement in the Childrens' Centers is more difficult to accomplish, since many parents are working full time. Regular educational meetings are held with parents in some Children's Centers for the purpose of discussing the parent's child as well as to provide parents with enrichment activities that can be used at home.

Health services are provided by a health consultant who does visual, hearing, and dental screening and makes referrals for those who need further treatment. In addition, the health consultant performs some on-site observations, as well as teaching health education courses to children and staff. Social services are provided by a psychologist, guidance worker and two community aides. These services utilize crisis intervention on a referral basis.

- Staff Assessment -- Both the supervising teachers and the staff were asked to rate the program on a series of criteria. Views expressed by supervising teachers are discussed below and those of the 28 responding staff persons are presented in Table 116.

  - Administrative support -- The supervising teachers felt that the central administration does not actively support and provide assistance in carrying out the above components. They view the central administration more as a monitor than a source for technical assistance and guidance. Morever, they believe that B.U.S.D. has historically treated ECE as a separate entity from the Kindergarten through Twelfth configuration.

- • Articulation -- All three supervising teachers felt that curriculum articulation of ECE with Kindergarten through Third Grade schools was not effective. Although some inter-site articulation had been attempted, it had proved to be inadequate due to central administrative factors.

- • The Number of ECE Slots -- Long waiting lists clearly indicate that child care needs in the community cannot currently be met by B.U.S.D. Because of this demand, families are selected on a first-come first-serve basis, assuming that they meet race, sex, and income requirements established by funding guidelines. Moreover, the primary school campus programs seem to exist more as a function of either tradition or of site administrator initiative, than as a function of demand. Specifically, there appears to be no rationale for why programs operate on some campuses and not on others.

- Physical sites -- The supervising teachers indicated that the physical sites were adequate in terms of spatial requirements, but that maintenance is needed.

- Materials and equipment - The supervising teachers felt that there had been enough material and equipment during the 1974-1975 academic year, but that in ensuing years, there would be a shortage since the allotment had not kept pace with inflation.

- Staff -- Supervising teachers felt that the staff to pupil ratios were adequate and that in general the staff were dedicated to doing an effective job.

- Educational Program and Auxilary Services -- All three supervising teachers believed that these components were operating effectively.

The ECE staff rated the ECE program highly in all program areas, with almost all responses being either "adequate" or "very good". This was true for both parent nursery and children's center staff in the areas of safety, space, cleanliness, equipment and materials, education programs, social areas, health services, food services, parent involvement, staff, and staff development. The areas of educational programs and staff were rated highest (*very good* indicated by 92% of all staff) with equipment and materials and cleanliness being rated lowest (33% and 44% indicating *very good* respectively).

- Conclusions -- In summary, it was found that the ECE program is servicing an important educational need in an effective manner. Both supervising teachers and staff rated the program highly in virtually all programmatic areas. However, the major changes planned in organizational structure have created a sense of disillusionment as well as a concern about the future of ECE. Within this context and based upon the findings, B.U.S.D. may need to consider the following conclusions:

- • Several factors suggest that B.U.S.D. would benefit from permitting ECE to remain autonomous rather than merge it with Follow Through and Compensatory Education. First, ECE serves a substantially different target population than Follow Through and Compensatory Education, and consequently, its needs and services are different. While coordinating those programs would be valuable for articulation, this advantage is outweighed by the above consideration. Secondly, ECE centers do not have site administrators. An independent structure is required to operate them on a daily basis. Follow Through and Compensatory Education offer examples of projects which are operated by site administrators.

• • Second, the approach used to deploy primary campus programs should be considered. Currently, it appears that primary campus programs are established on the basis of individual site initiative rather than on some equitable response to consumer need. Since it is clear that ECE needs cannot be fully met, a more equitable program distribution effort should be instituted.

Adult Education Program

The Adult Education Program was examined in terms of the Adult Schools's current status in four areas: 1) school objectives, 2) existing programs, 3) accomplishments, and 4) needs.

Berkeley Adult School is a day and evening adult high school. It was formally organized in 1965 through the merger of the McKinley Day Adult School and the Berkeley Evening School. In 1971, the school was permanently housed at its present location. The school is administered by a three person staff including a site administrator, vice principal, and coordinator of the basic education program with support services rendered by four counselors, three of whom work on a full time basis and one part-time. Its enrollment has been steadily increasing over the last two years. Enrollment during the 1974-75 academic year reached 5,400 and the average daily attendance was 1,700.

- Objectives - The Adult School's objective, stated in its broadest sense, is to make life-long education a reality. In order to fulfill its responsibility for providing continuing education for adults, the B.U.S.D.'s Adult Education program has established the following seven objectives:
  - To help individuals understand the development and functioning of our governmental institutions, the rights and responsibilities of various related races, and the

background of current issues so that they may play more meaningful roles in a multiracial, multicultural society.

• • To develop basic skills in all students in order to achieve educational parity, and to recognize the special problems of Blacks and Chicanos where they exist in order to develop a plan for learning that will correct the deficiency.

• • To enable individuals of all ages to enjoy equal access to societal payoffs, upgrade their skills in their present occupation, and train or retrain for a new occupation.

• • To help students improve the quality of their family life and give their children the maximum benefits of a good home environment.

• • To play a dynamic role in providing development and services which will encourage individuals and groups to participate meaningfully in community life with mutual respect for one another and parity in the sharing of power.

  - To enable individuals of all ages to understand, appreciate, and enjoy culture, fine arts, and the humanities; to develop their special talents and enrich their personal lives.

  - To provide counseling and guidance services to students so that they may plan for and select those educational experiences which will most effectively help them achieve the above objectives.

- Program -- The Berkeley Adult School strives to be an increasingly valuable community asset by responding to the educational needs of adults and for providing an instructional forum for considering matters of community concern. Employing flexibility in program development, it continually tries to identify new educational needs of the multi-ethnic adult population which it serves.

  To render an educational service for a highly diversified community such as Berkeley, flexibility in scheduling and curriculum design is required. Courses are offered on a twelve month calendar, four quarters a year. The instruction is given daily Monday through Thursday from 8 A.M. - 10 P.M. and on Friday until 4 P.M. While most classes are held at the school site, a number are located directly in the community. For example, instruction in the gerontology program is housed at local convalescent homes and senior citizen centers.

The eight programs around which instruction is structured are each designed to meet the needs and interests of the Adult School's broad spectrum of users. The eight programs and the topical areas included therein are listed below:

Academic Areas

1)Adult Basic Education
2)High School Subjects
3)GED Preparation & Testing
4)Foreign Languages
5)English as a Second Language
6)Special Fields (Liberal Arts)

Vocational Education

1)Office Occupations
2)Fashion Arts - Vocational
3)Food Service Training in Safety and Sanitation
4)Test Preparation
5)Sewing for Profit
6)Sewing for Handicapped

Fine Arts and Crafts

1)Berkeley Community Chorus & Orchestra
2)Berkeley Women's Chorus
3)Painting and Drawing
4)Fabric Arts
5)Earthware and Metal Arts
6)Woodworking

7)Visual Arts (Photography, Films, Video, etc.)

8)Drama

- • Citizenship Preparation

- • Parent Education

- • Gerontology

1)World Affairs & Current Events

2)Music Appreciation

3)Arts & Crafts

- • Personal Development

1)Applied Psychology

2)Health & Physical Education

3)Sex Education

4)Rehabilitation Education (Drugs & Mental Problems)

5)Sewing

6)Adult Education for Mentally Retarded

- • Consumer Education

1)Food Preparation

2)Auto Mechanics

3)Clothing Construction

4)Driver Education

5)Financial Planning

- **Accomplishments** -- In assessing the accomplishments of an educational program which is dependent upon voluntary association, enrollment is one of the most meaningful measures. Over the last few years there has been a marked upswing in the Adult School's enrollment. This upswing in enrollment, while on the one hand being a response to a number of internal and external changes, was itself a catalyst for change. These factors are all so intermeshed that there is no clear-cut cause and effect relationship between the increased enrollment and the changes effecting the school. They have resulted in numerous positive contributions to the Adult School.

Program development is the one area where there have been major changes. In recent years emphasis at the Adult School has shifted from its traditional concentration on problems of basic education, to its current, more comprehensive perspective. This trend has been toward servicing the needs of the adults, including those with high school, college and even graduate degrees, yet continuing to effectively deliver basic skills. Currently it offers eight different programs of study. Consumer education and gerontology are evidence of its new trend in continuing education for the entire adult community.

Not only did the school broaden its program offerings, it also relocated in a newly constructed site. Now classes which had previously been housed at a variety of facilities throughout the district are centralized in a safe, modern plant. As these changes enhanced the Adult School's appeal, the creation of the "Berkeley Adult Educator," the school's bulletin, formally marketed its offerings. Published quarterly, the brochure is mailed to all Berkeley home owners and 50% of its apartment dwellers. At about the time the Berkeley Adult Educator was created, Grove Street Campus of the Peralta Junior College System closed, reducing available options for adult education in the immediate community. Flexibility in hiring instructional staff enabled the school to effectively respond to these new demands. By increasing its hourly staff the school was able to introduce new courses and additional sections.

- Needs -- Needs, too, are closely related to the school's growth rate. The five areas of need identified by the school's administrators include 1) personnel; 2) support services; 3) users; 4) physical space; and 5) curriculum.

  - Personnel - During the period of increasing enrollment growth, the size of the school's administrative, supervisory and clerical staff was not commensurate. Staff needs have been identified in five areas: 1) clerical staff; 2) educational guidance staff; 3) intermediate supervisory staff; 4) administrative staff; and 5)counseling staff.

Additional counselors and a guidance staff are needed simply to serve the current student body. The need is especially great in the academic program where effective formal counseling and guidance is important in reducing student attrition and increasing student success. Intermediate supervisory staff as program heads or chair-persons are needed to define curriculum objectives and to effect coordination within the academic program. Curriculum planning and coordination is a particular problem in programs which grant certificates or diplomas. Finally, if continued growth is to occur, additional clerical staff is needed to handle the office work involved with an increasing enrollment.

- Users -- Broadening the base of the user population so that it is more respresentative of the community's diversity is an expressed need. More users are needed in the categories of 1) Afro American, Asian, Chicano and Native American ethnic origin; and 2) persons with low incomes.

Serving principally the White middle class population, who typically reside in the Berkeley hills, the school is striving to deliver its services to a larger spectrum of the community. Programs designed by, and delivered to, ethnic users in their communities in south and west Berkeley, is one objective. Again though, additional administrative staff and adequate support services are necessary if this need is to be met.

• • Support Services -- Several new services are needed to provide supportive services for the users the school is striving to reach. Principal among these are child care and tutoring.

Child care is considered a particularly important service if the school is to in fact be as broad-based in reality as it is in theory. The availability of child care would enable many minority and low-income adults to attend the school. Tutoring, like counseling is a support service which mitigates against attrition.

• • Curriculum -- Curriculum planning and expanded breadth of subjects were both identified as curriculum needs. Curriculum planning is particularly needed in the certificated and diploma programs. Increased subject breath, while needed in all programs, is especially critical in the high school subjects areas. Flexibility in granting high school credit for work experience is another need within the high school subjects areas.

    - Physical Space -- The physical plant of the Adult School is being used to full capacity. Needs in the area of physical space include classroom space, and a meeting room.

      Availability of classroom space is a problem which is most serious during the day because space in other district facilities is not available at this time as it is at night. Currently, the school is renting additional space. Existing space for counselors is also inadequate. The actual number of rooms, as well as waiting room space are all insufficient to provide counselor service to the existing student body.

- Conclusions -- It is a general feeling among the administrative staff, that the Adult School is making lifelong education a reality. Several conditions were discussed by survey participants which prompt the following conclusion:
    - The instructional staff, programs, and facilities enable the school to deliver quality instruction. Nevertheless, a need is felt for additional administrative support, and clerical personnel. B.U.S.D.'s central administration may find it advantageous to explore how this perceived personnel need might be met. In view of the Adult School's potential for generating revenue by increasing its daily attendance, such a personnel expan-

sion might prove to be a good investment.

• • In order to more adequately fulfill the need for child care of Adult School students, B.U.S.D. may find it useful to investigate the availability of child care services in the adjacent Early Learning Center or in other neighboring facilities.

• • To enhance the Adult School's present success in attracting participants, systematic approaches for attracting users should be applied to an even broader population base (e.g., persons from *all segments* of the population who are in need of adult basic education, vocational training, diploma work, opportunities for creative activities, or personal enrichment).

Staffing Patterns

This district, with its additional personnel funds from federal and state project monies has innovatively deployed staff in an effort to teach basic skills to all its students. Toward this end it has broadened the concept of the instructional environment from the more traditional notion of the self-contained classroom to include numerous out-of-class environments and services. Thus, basic skills delivery in B.U.S.D. involves the classroom teacher and an array of other certificated and classified personnel.

Despite B.U.S.D.'s more flexible definition of the instructional environment, innovations in the distribution of minorities and women within the staffing structure are only beginning to emerge. In education, as in many other professions Blacks and women have been systematically denied access to preferred or high status positions (Parrot, 1974). B.U.S.D., while making significant strides toward affirmative action, has not yet achieved the employment equities that it advocates. The analysis of staffing patterns which follows will describe the current staffing patterns of several personnel categories with respect to race and sex.

The B.U.S.D. staffing patterns were examined on the basis of four issues: 1) patterns of staff utilzation; 2) patterns of staff to student ratios; 3) staffing patterns on the basis of sex; and 4) staffing patterns on the basis of race. Information was collected from district personnel statistics. The statistical descriptions used were organized on the basis of school site and

and grade level. The discussion is limited to a description of the five job categories formally involved in the delivery of basic skills. Highlighted in the ensuing discussion are the more interesting comparisons and trends in the data on these five categories.

- Patterns of Staff Utilization -- Since this study was not designed to directly address staff utilization patterns, the following information relates only to how specific personnel have been allocated in the delivery of basic skills. It is not meant as an assessment of all personnel. Without overlooking the fact that the classroom teacher at all grade levels has traditionally been responsible for and continues to provide leadership and direction in teaching basic skills, it is intended here to simply focus on Berkeley's innovative use of additional personnel. The staffing patterns described here result principally from special project funding. The personnel involved are for the most part in primary schools, which is the reason for this discussion's emphasis on the elementary grades.

  The teaching of basic skills at the present time in the elementary grades falls primarily upon the classroom teacher, skill specialists, and instructional aides. All but four Kindergarten through Six schools have instructional aides and at most sites they are assigned on a full-time basis to the classroom.

The actual role of the instructional aide varies not only with the program and site, but also with the classroom assignment. Follow Through assigns all of its instructional aides on a full-time basis to the classroom while Compensatory Education and ESAA aides are not always used exclusively in the classroom. At some sites instructional aides work a portion of their time in out-of-class environments. For instance, the basic skill labs, enrichment centers and multi-cultural centers at certain schools use instructional aides for limited periods. The major differences in the utilization of aides arise from varying needs for assistance of individual teachers. Within the class, instructional aides are utilized in at least four basically different ways: 1) working directly and closely with the teacher in planning and instruction; 2) instructional responsiblities under teacher direction but without involvement in the planning process; 3) instructional responsibilities without teacher direction and without participation in planning and 4) no involvement in formal basic skill instruction.

Presently skill specialists play a pivotal role in the process of teaching basic skills. Assigned to elementary schools, they work primarily outside of the classroom by assisting the teacher in curriculum development, instructional methodology, individualization, and staff training. Skill specialists are generally concerned with basic skill delivery to under-achieving students. At some sites they also address student enrichment needs. Chief among their responsibilities in the curriculum area is diagnosing and prescribing for children with reading problems. Diagnostic and prescriptive work-ups for mathematic problems occur, but to a lesser degree. To an even more limited degree, skill specialists are involved in identifying perceptual motor problems.

At one of the Kindergarten to Third grade schools, for example, a staff of four skill specialists work with identified Compensatory Education students in two settings. Each student spends several hours a week for six to eight weeks in the lab for a diagnostic-prescriptive work-up. When the student is returned to the classroom the teacher is expected to continue the prescriptive program. There is further follow-up by the skill specialist who works regularly with identified students in the classroom during the basic skill instruction period from 9:00 to 11:00 a.m. daily. The skill specialist also diagnoses all students who enter mid-year. This process is similar at other schools, though many rely exclusively on pull-out programs for special instruction and on teacher referrals for identifying student needs.

Diagnostic perceptual motor work-ups and student instruction are conducted by skill specialists. Two Kindergarten to Third grade schools for instance, have formal programs where entering Kindergarten students are all examined. Identified students are formally trained out of class at these sites.

Textbook selection, another integral part of curriculum planning, is orchestrated in many sites by skill specialists. Working sometimes independently, although in most instances with a teacher committee and/or the site administrator, skill specialists select the school's textbooks.

Major responsibility for assisting teachers who desire help in setting up learning centers within their classrooms often falls to skill specialists. Learning centers are utilized principally for the teaching of basic skills and are considered important tools in individualized instruction.

Finally skill specialists are actively involved in staff development, especially in training teachers in individualization. Training, which is supervised, and in a number of instances actually conducted, by skill specialists ranges in scope from curriculum development and instructional methods to changing teacher attitudes toward learning styles, cultural patterns, and perceptual motor development.

The Student to Staff Ratio -- Three personnel categories were used in the computation of the student to staff ratio: 1) certificated personnel of regular self-contained classrooms; 2) classified instructional aides within the classroom; and 3) certificated personnel whose assignments are primarily outside the self-contained classroom (e.g., a skill specialist). Defined in this way, the student to staff ratio at the Kindergarten to Third grade level ranged from a low of 12.33 at Cragmont to a high of 20.16

at Tilden. The range at the Fourth through Sixth grade schools is much less, with a low of 17.90 at Columbus and a high of 19.97 at Franklin. There was no real variation at the Seventh through Ninth grade schools. King and Willard both had a ratio of 20.24. At West Campus the ratio (21.38) was just a little higher than that of the Seventh to Eighth grade schools. Berkeley High had a 19.45 ratio. The low ratio in the elementary grades was accounted for in great part by the presence of instructional aides within the classroom (Table 117).

Staffing Patterns by Sex -- The following discussion presents a comparison of males and females for all certificated staff, regular classroom teachers, administrative staff, instructional aides and pupil personnel (Table 118).

Of the district's 1,096 certificated staff, including central administrators, site administrators, support staff, teachers, guidance, psychology and counseling staff, 65% are female. Within this staff, even though it is predominantly female, there is a sex related staffing pattern differentiated by job category and grade level. For instance at the Kindergarten through Third grade level, 94% of the teachers are female, while only 41% of the high school teachers are female. At the Fourth through Sixth grade level 75% of the staff is female, while at the Seventh through Ninth grade level only 48% is female. Thus, the percentage of females decreases as the grade level increases. (Figure 20).

The administrative structure at the site level is

Table 117. Student to Staff Ratios at B.U.S.D. Schools

School	Ratio	CERTIFICATED				CERTIFICATED/CLASSIFIED			
		In Class		Out Class		In Class		Out Class	
		Number	Percent	Percent	Number	Number	Percent	Percent	Number
Cragmont	12.33	17	74	26	6.	17	60	40	11.2
Emerson	13.93	15	83	17	3	15	70	30	6.4
Grizzly Peak	16.71	5	71	29	2	5	100		0.0
Hillside	17.22	12	71	29	5	12	100		0.0
Jefferson	16.65	19	79	21	5	19	79	21	5.5
John Muir	18.51	19	88	12	2.6	19	83	17	4.0
LeConte	15.46	12	73	27	4.5	12	75	25	3.0
Oxford	19.10	11	79	21	3	11	87	13	1.6
Thousand Oakds	16.33	21.4	88	12	3	24	73	27	8.0
Tilden	20.16	5	83	17	1	5	100		0.0
Washington	15.84	18	78	22	5	18	76	24	5.6
Whittier	13.86	16	78	22	4.6	16	63	37	9.6
Columbus	117.90	19	62	38	11.8	19	100		0.0
Franklin	19.97	23	72	28	8.8	33	85	15	5.6
Longfellow	18.44	29	73	27	10.6	29	86	14	4.8
Malcolm X	18.16	25.5	70	30	10.8	25.5	93	7	1.8
King	20.24	44.2	97	3	5	54.2	97	3	1.6
Willard	20.24	38.14	91	9	3.95	38.0	100		0.0
West Campus	21.38	41.0				41.1	97	3	1.2
Berkeley High	11.12	142.0	97	3					
					.5	13.0	100		0.0
Kindergarten-Three	16.35		78	22			80	20	
Four-Six	18.61		69	31			91	9	
Seven-Nine	20.62		94	6			98	2	
Ten-Twelve	19.45		98	2			97	3	
Early Lrn. Center	7.0	5.2	83	17	1.0				
Kilimanjaro	26.0	2.6	100						
Odyssey	14.0	5.4	100						

Table 118. Staffing Patterns for Female and Male Personnel

	Classified In Class & All Certificated				All Certificated				Classified In Class				Site Administration			
	Female		Male		Female		Male		Female		Male		Female		Male	
School	Number	%	%	Number*	Number	%	%	Number	Number	%	%	Number	Number	%	%	Number
Cragmont	20.2	88	12	2.8	21	91	9	2	11.2	100		0	0		100	2
Emerson	23.4	96	4	1.0	17	94	6	1	6.4	100		0	0		100	1
Grizzly Peak	5.0	100	0	0	5	71	29	2	0	0	0	0	0		100	1
Hillside	16.0	89	11	2.0	16	89	11	2	0	0		0	0		100	1
Jefferson	26.0	90	10	3.0	23	92	8	2	4.0	80	20	1	1	50	50	1
John Muir	25.0	98	2	.6	21	97	3	.6	4.0	100	0	0	1	50	50	1
Le Conte	19.2	94	6	13.0	16	97	3	.5	3.2	80	20	.8	1	100		0
Oxford	14.6	94	6	1.0	13	93	7	1	1.6	100	0	0	0		100	1
T.O.	31.4	97	3	1.0	23.4	96	4	1	8	100		0	1	50	50	1
Tilden	6.0	100	0	0	6	0		0	0	0		0	0			0
Washington	23.6	83	17	5.0	18	78	22	5	5.6	100		0			100	2
Whittier	29.2	97	3	1.0	19.6	95	5	1	9.6	100		0	1	50	50	1
Columbus	23.8	77	23	7.0	23.9	77	23	7	0	0		0	1	50	50	1
Franklin	35.2	74	26	12.2	29.6	71	29	12.2	25.6	100		0	0		100	3
Longfellow	33.5	75	25	10.9	29.5	75	25	10.1	4	83	17	.8	0		100	2
Malcolm	28.8	76	24	9.3	28.0	76	24	8.3	.8	44	36	1	0		100	2
King	33.6	55	45	27.2	32.8	55	45	26.4	.8	50	50	.8	2	50	50	2
Willard	18.1	43	57	23.1	18.1	43	57	23.7	0	0	0	0	1	25	75	3
West Campus	21.6	46	54	25.3	20.8	45	55	24.95	.8	66	33	.4	0		100	3
BHS	57.4	41	59	83.	53.8	39	61	83.0	3.6	100		0	42	38	69	59
East Campus	5.8	43	57	7.7	5.8	43	57	7.7	0	0		0	0			2
K - 3	239.6	93	7	18.7	199.0	92	18	18.1	53.6	96	4	1.8	5	29	71	12
4 - 6	122.0	75	25	39.0	112.0	75	25	37.0	10.4	85	15	1.8	1	11	89	8
7 - 9	73.3	49	51	76.2	71.7	49	51	75.0	1.6	57	43	1.2	3	27	73	8
10 - 12	57.4	41	59	83.0	53.8	39	61	83.0	3.6	100	0	0	4.2	38	62	6.9
ELC	5.7	92	8	.5	5.7	92	8	5.0	0	0	0	0				
Kilimanjaro	1	63	37	1.6	1.0	38	52	1.6	0	0	0	0				
Odyssey	2.8	52	48	2.6	2.0	43	57	2.6	.8	0	0	0				
Off Site													72	65	35	39

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*Fractional assignments reflect the distribution of staff time across more than one site, or the assignment of part time personnel

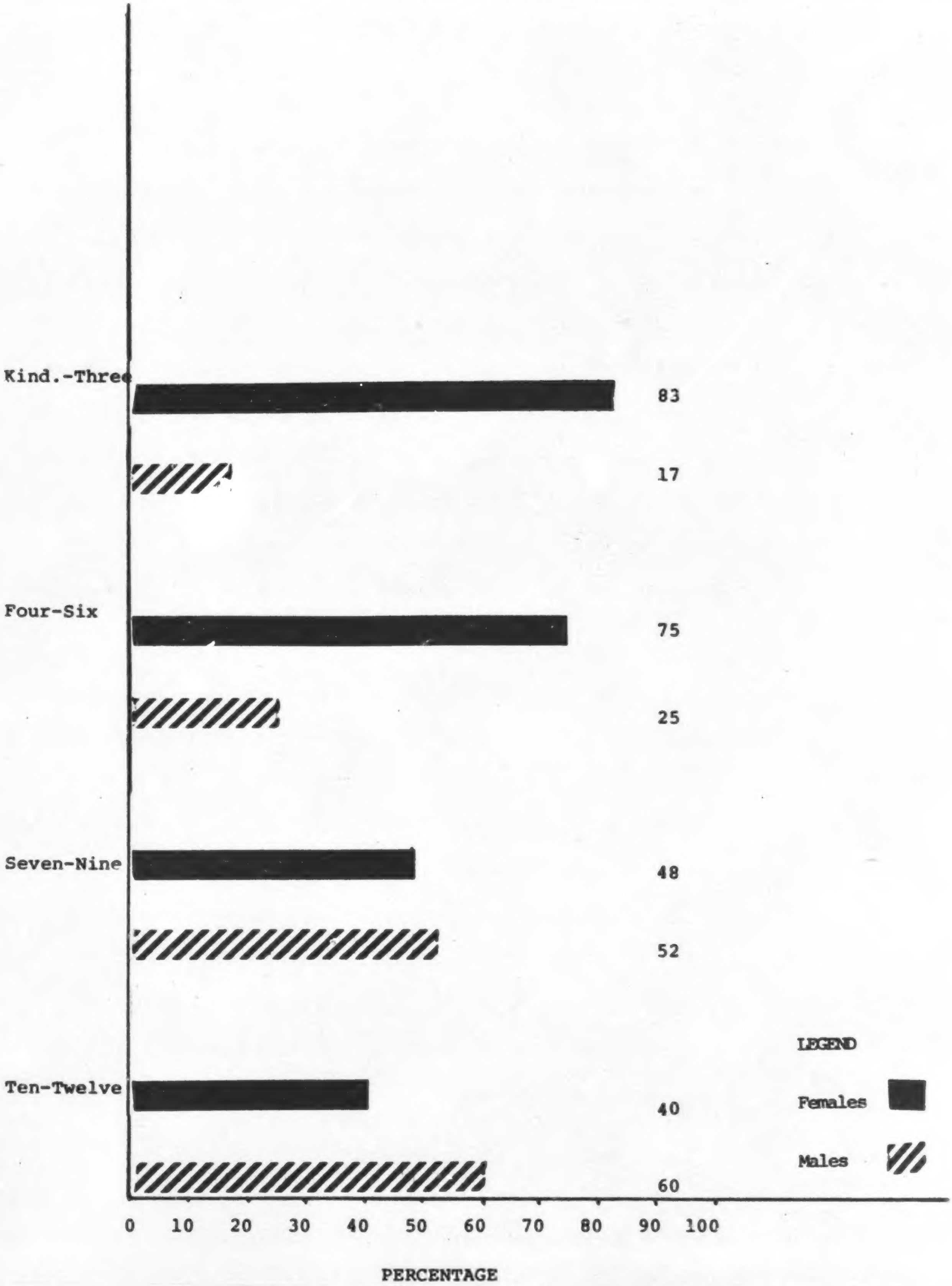

Figure 20. Distribution of Certificated Personnel on the Basis of Sex

not directly comparable across grade levels because there is a marked difference in the administrative structures of elementary and secondary schools. Used in its narrowest sense, site administration includes principal, vice principal and administrative assistants. This definition, while applicable for describing the primary level administrative structure, is not a very useful framework for describing the administrative structure at the secondary level. To adequately describe the secondary level administrative staffing pattern, the term must be defined more broadly so that it includes deans, program directors, coordinators and supervisors in addition to the three administrators.

Employing either definition, the administrative staffing pattern favors the male (Figure 21). Of the district's forty-four principals, vice principals, and administrative assistants only eleven are female, while within this group just four are principals. Even though most of the female administrators are assigned to the primary schools, only eleven of the seventeen positions at the Kindergarten to Third grade level are filled by women. A mere 11% of the nine positions at the Fourth through Sixth grade schools have female personnel.

As noted earlier, the situation at the secondary level is more complicated. Looking at the administrative staff (defined in the narrow sense) there are 11 administrators and only two are women. Although the figures change when

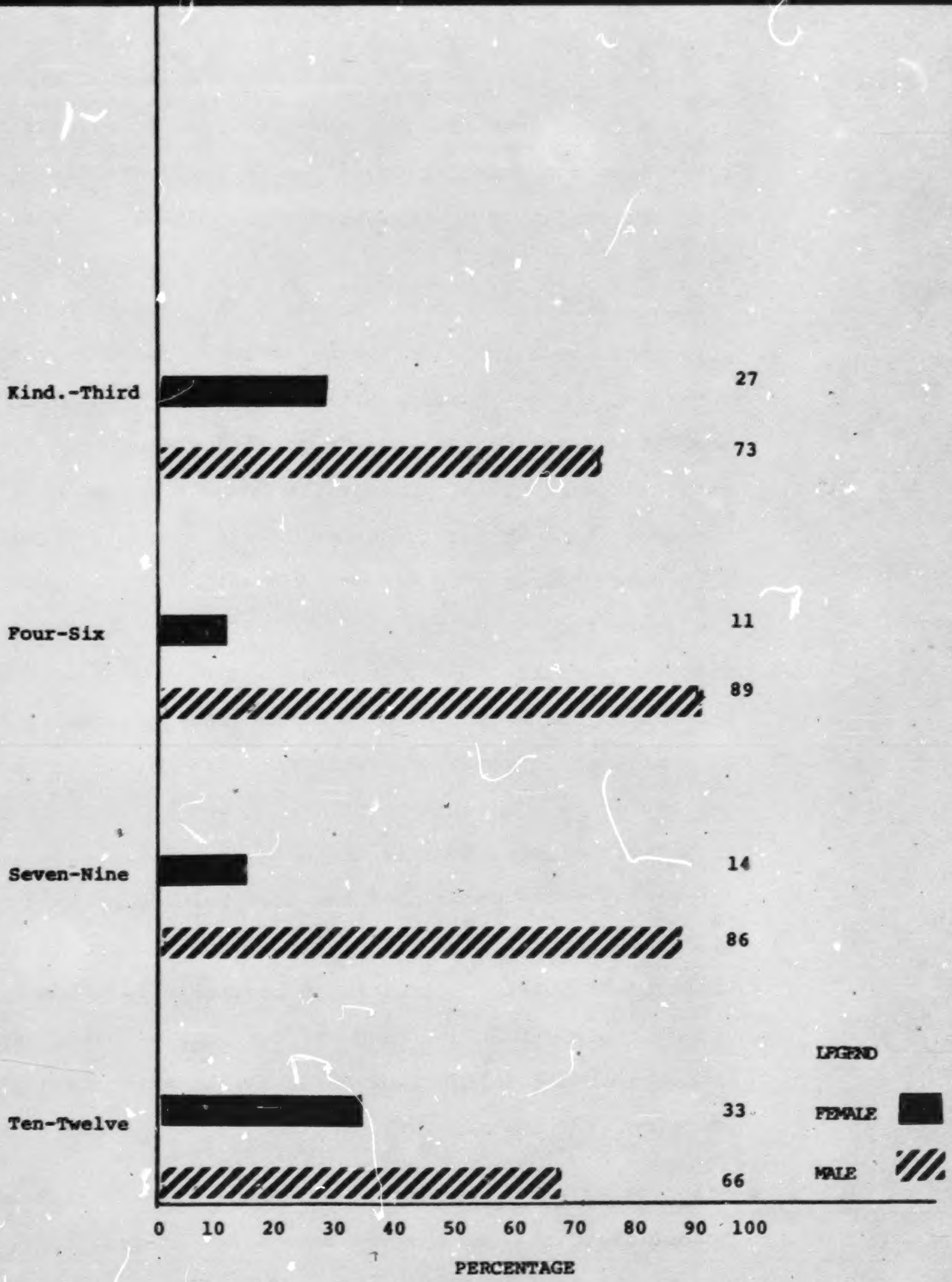

Figure 21. Distribution of Site Administrators on the Basis of Sex

it is defined more broadly, the situation is still quite bleak from the perspective of female staff members. Under broader definition of administration, 29% of the staff is female.

A similar pattern emerges from the data on pupil personnel which includes the psychology, guidance, and counselor staff. Guidance, psychology and counseling staff have 54.60 persons and women represent 48% of this group. It is not very useful however, to compare psychology, and guidance staff across the grade levels since the staffing structure differs with the grade level. The situation is different for counselors who are assigned full time at each site. The staff of 33 counselors includes 13 females. Fifty percent of the Fourth through Sixth grade counseling staff is female while women represent only 38% of the Ninth through Twelfth grade counseling staff.

Instructional Aide is the only one of the five job categories where women have the overwhelming majority at all grade levels. A total of 89% of the instructional aides are female. Interestingly too, this is the only job category within the group of personnel immediately involved in the delivery of basic skills which is a classified position.

- Staffing Patterns by Race -- Berkeley, like so many urban school districts has a very large Black student body. Over 43% of the student population in B.U.S.D. is Black, making Blacks the largest single ethnic group (Table 119). Al-

Table 119. Student Population by Ethnic Grouping[1]

Ethnic Group	Percent
American Indian	.01
Asian	6.6
Black	43.8
Caucasian	44.7
Chicano	3.5
Other	2.0

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[1] ADA October 1974

though Blacks constitute a major part of the student body, they are under-represented at the staff level (Table 120, Figure 22). For purposes of this analysis the staff has been organized into two groups: Black and Non-Black.

Looking at the race statistics on the district's classified instructional aides and certificated staff, including district administrators, site administrators, pupil personnel and teachers, provides an impression of the Black staffing pattern (Table 120). A mere 28% of the total district's certificated staff are Black. The proportion of Black certificated staff is lowest at the Kindergarten to Third grade and the Secondary level. Barely 23% of the Kindergarten through Third grade certificated teachers are Black (Figure 23). Even with the concentration of instructional aides at this grade level which increases the number of Black staff actually in the classroom, only 39% of the in-class staff is Black. This is markedly less than the student body. At 37%, the number is slightly higher at the Fourth through Sixth grade level. However, this figure is somewhat misleading since it includes a significant number of temporary employees. Thirteen of the twenty temporary teachers (persons hired by the district on a one year contract) are assigned to the Fourth through Sixth grade schools. A total of seven of this thirteen are Black. Discounting the temporary staff, the number of certificated teachers is reduced by seven. Revising the figures in this way, so that they reflect only

Table 120. Staffing Patterns for Various Racial Groups

School Name	In Class Black/ Non Black Number	%	%	Number	Certificated Black/ Non Black Number	%	%	Number	Certificated Black In Class/ Out Class Number	%	%	Number	Classified Black/ Non Black Number	%	%	Number	Site Administration Black/ Non Black Number	%	%	Number
Cragmont	17.4	52	48	16.8	7.0	30	70	16.0	4.0	57	43	3.0	10.4	92	8	.8	1	50	50	1
Emerson	9.4	38	62	15.0	3.0	16	84	15.0	3.0	100	0	0.0	7.1	100		0.0	0		100	1
Grizzley Peak	1.0	20	80	4.0	1.0	20	80	4.0	1.0	100	0	0.0	0.0	0	0	0.0	0			0
Hillside	7.2	42	58	9.8	7.2	42	58	9.8	6.0	83	17	1.2	0.0	0	0	0.0	0			0
Jefferson	6.0	28	72	2.3	5.0	21	79	19.0	4.0	80	20	1.0	1.0	20	80	4.0	1	50	50	1
John Muir	7.6	30	70	18.0	3.6	16	84	18.0	3.0	83	17	.6	4.0	100	0	0.0	1	50	50	1
Le Conte	8.7	42	58	11.8	5.5	33	67	11.0	3.0	55	45	2.5	3.2	80	20	.8	1	100		0
Oxford	6.6	42	58	9.0	5.0	35	65	9.0	4.0	80	20	1.0	1.6	100	0	0.0	0		100	1
Tilden	1.0	16	84	5.0	1.0	16	84	5.0	1.0	100	0	0.0	0.0	0	0	0.0	0			0
Thousand Oaks	13.2	40	60	19.2	6.6	25	75	8.4	6.0	100	0	0.0	7.2	90	10	.8	1	50	50	1
Washington	8.6	30	70	20.0	3.0	13	87	20.0	2.0	67	33	1.0	5.6	100	0	0.0	0		100	2
Whittier	13.6	45	55	16.6	4.0	19	81	16.6	3.0	75	25	1.0	9.6	100	0	0.0	0		100	2
Columbus	14.0	45	55	16.8	14.0	45	55	16.8	7.0	50	50	7.0	0.0	0	0	0.0	1	50	50	1
Franklin	11.6	24	76	35.8	10.0	23	77	31.8	8.0	80	20	2.0	1.6	27	73	4.0	1	33	67	2
Longfellow	20.8	47	53	23.6	16.0	40	60	23.6	12.0	75	25	4.0	4.8	100	0	0.0	1	50	50	1
Malcolm	16.3	42	58	22.8	14.4	39	61	21.8	9.5	66	34	5.0	1.8	100	0	0.0	1	50	50	1
King	18.2	30	7	42,6	18.2	30	70	41.0	17.0	93	7	1.2	0.0	0	100	1.6	2	50	50	2
Williard	13.8	33	67	28.0	13.8	33	67	28.0	12.6	91	9	1.2	0.0	0	0	0.0	2	50	50	2
West Campus	16.2	35	65	30.0	15.1	33	67	30.0	14.6	97	3	.40	1.2	100	0	0.0	1	33	67	2
BHS	24.8	17	83	115.3	21.2	15	85	115.7	20.2	95	5	1	3.6	100	0	0	4.4	40	60	6.7
East Campus	3.4	25	75	10.1	3.4	25	75	10.1	3.4	100	0	0	0	0	0	0	0	0	100	2.0
ELC '	1.0	21	79	2.2	1.0	21	79	2.2	0		100	1	0	0		0	0			.2
Kilmanjaro	1.0	27	73	1.6	1.0	27	73	1.6	1.0	100		0	0		0	0	0			0
Odyessey	2.8	52	48	2.6	2.0	52	48	2.6	28	51	49	2.6	.8	100		0	0			0
K-3	100.3	40	60	47.5	51.3	24	76	161.8	40.0	78	22	11.3	49.7	89	11	6.4	5	33	67	49
4-6	52.7	39	61	99.0	54.5	37	63	94.0	36.5	67	33	18.0	8.2	67	33	4	4	44	54	5
7-9	48.2	32	68	100.6	47.1	32	68	99.0	44.2	94	6	2.8	1.2	43	57	1.6	5	45	55	6
10-12	24.8	17	83	115.6	21.2	15	85	115.7	20.2	95	5	1.0	3.6	100	0	0	4.4	40	60	6.7

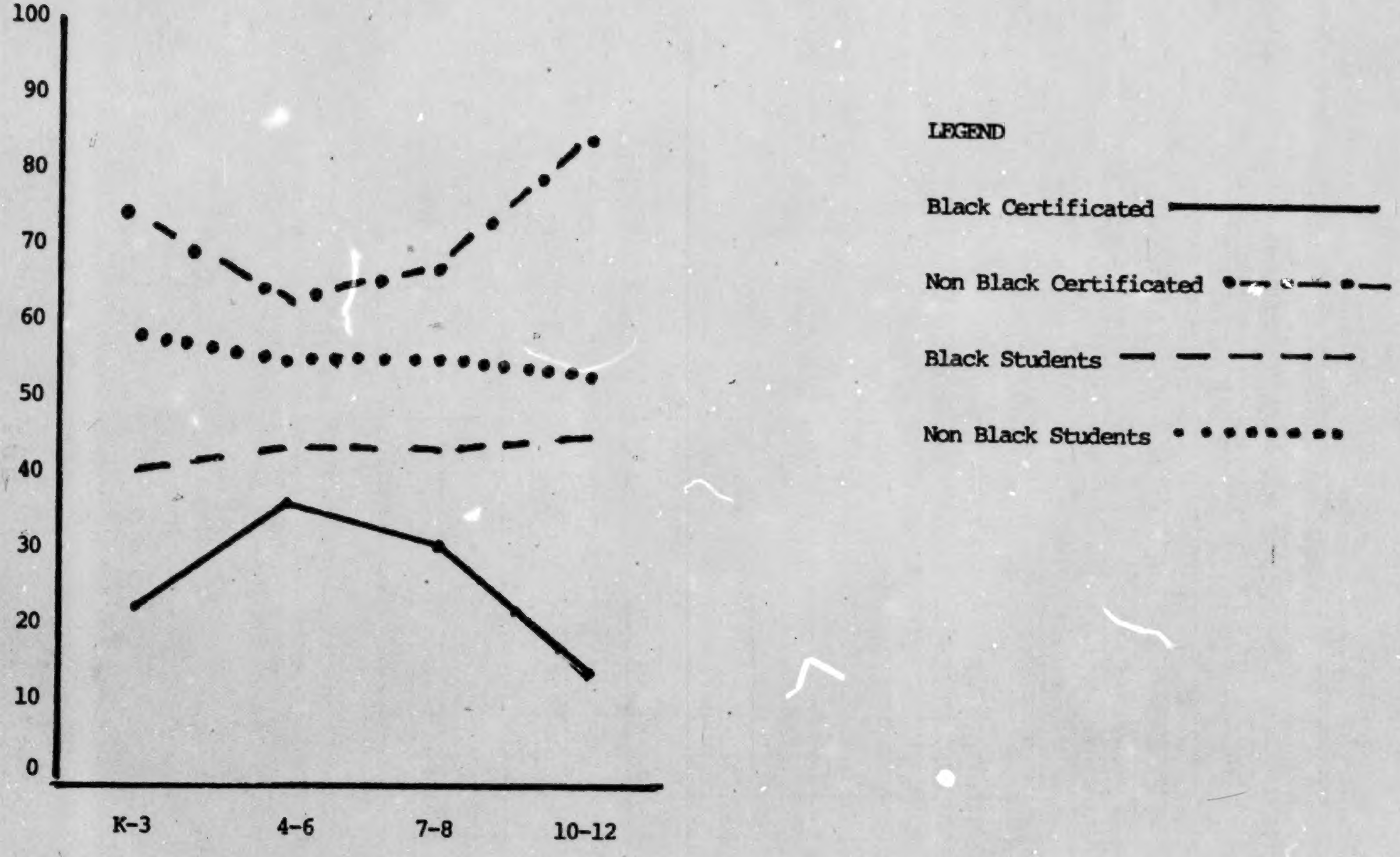

Figure 22. Relative Racial Distribution of Certificated Staff and Students

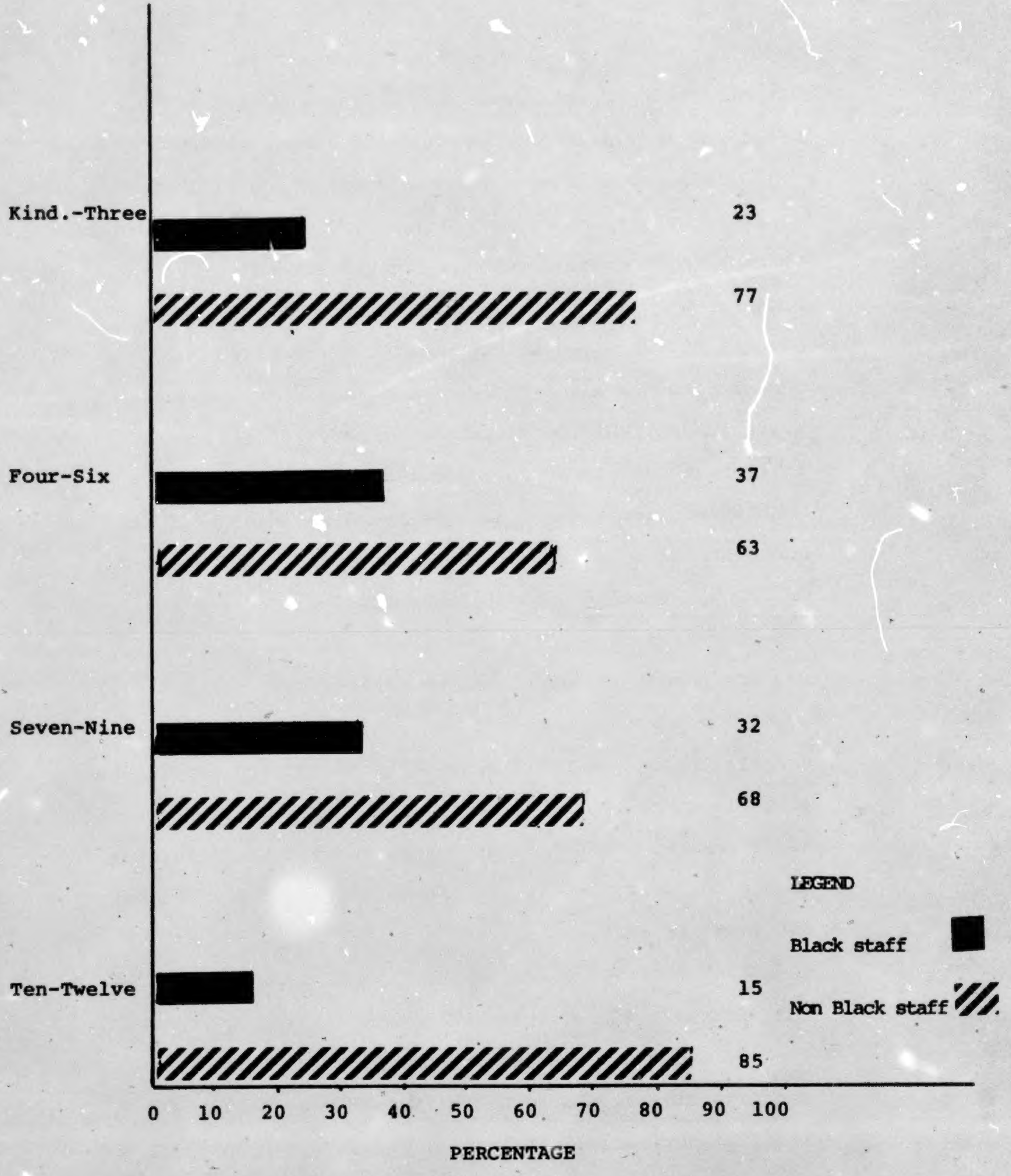

Figure 23. Distribution of Certificated Staff on the Basis of Race

permanent teachers, Blacks just represent 35%. At the Seventh through Ninth grade level Blacks constitute 32% while they represent 15% of the high school staff.

The picture is somewhat different where site administrators are concerned (Figure 24). At the Kindergarten through Third grade level the figures strongly favor Non-Blacks. Only 25% of the administrators at this level are Black. Blacks have just three of the ten principalships and one of these is a temporary appointment. At the Fourth through Sixth grade level the situation is more favorable for Blacks. In fact, three of the four schools have Black principals. On the secondary level, using a broad definition of the administrative structure, some 43% of the staff is Black.

Pupil Personnel on the other hand has a much greater Non-Black representation. Of the total staff of sixty, just 22% are Black. Guidance and psychology staff is 25% Black. Among the thirty counselors there are just six Black staff members. Heaviest Black representation of pupil personnel staff is at the Fourth through Sixth level where the staff is 75% Black. This however contrasts with the situation at the secondary level. At the secondary schools 25% of the staff is Black.

Instructional aides, are not only predominantly female, but virtually all of them are Black.

It is quite apparent in this district with its significantly large Black student body that the staff is not racially balanced. Persons responsible

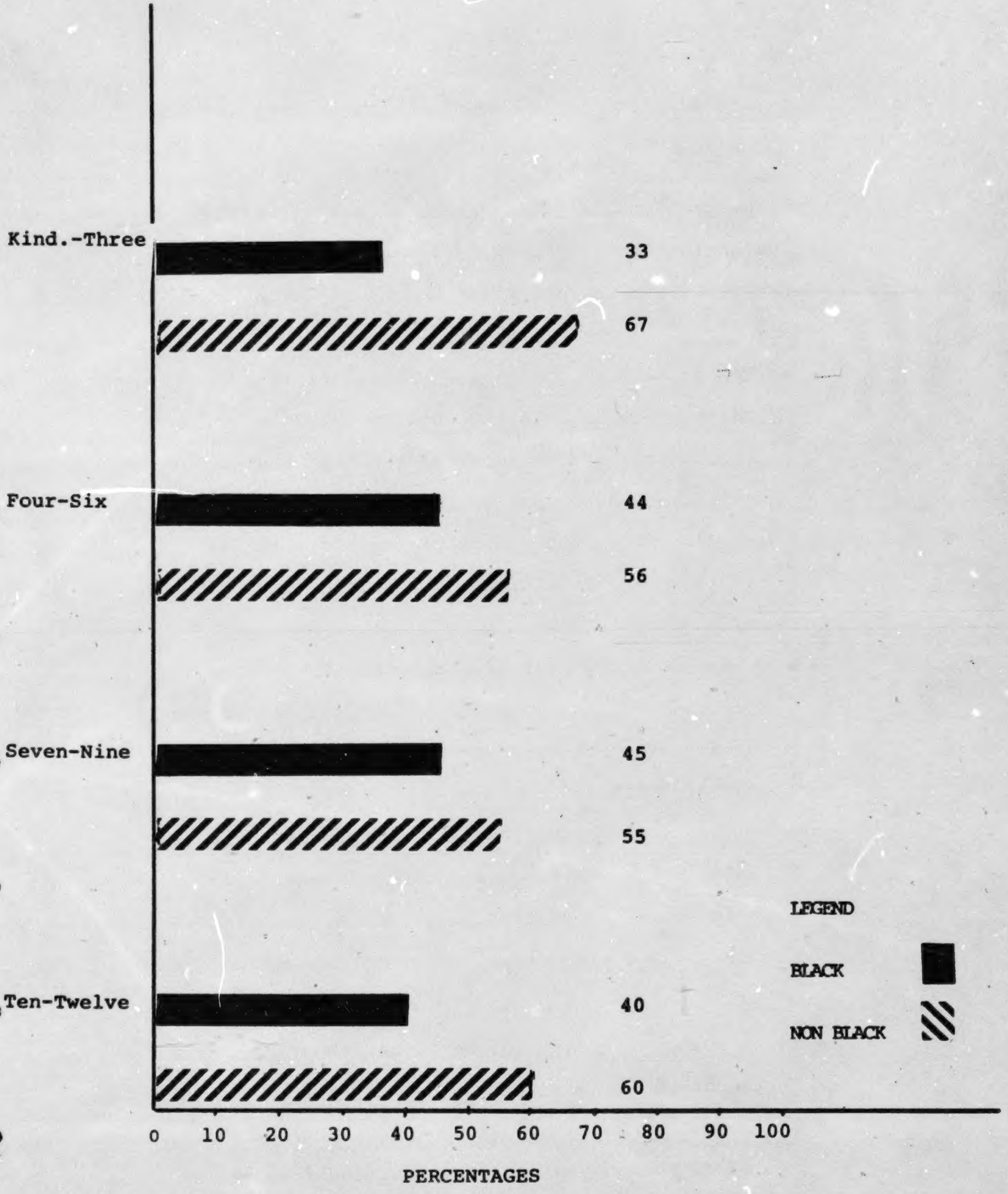

Figure 24. Distribution of Site Administrators on the Basis of Race

for the delivery of basic skills do not reflect the same ethnic distribution found in the student body.

- Conclusions -- The staffing patterns in B.U.S.D. reflect problems in implementing advocated affirmative action goals. Specifically, staffing patterns in B.U.S.D. are characterized by the following conditions.
    - The student to staff ratio in Kindergarten to Third grade schools ranged from 12.33 to 20.16 (including instructional aides). In Fourth to Sixth grade schools the range was 17.90 to 19.97, and at the junior high schools it was 20.24 to 21.38. For high school the ratio was 19.45.
    - The percentage of female teachers is inversely related to grade level, ranging from 94% of the Kindergarten to Third grade teachers to 41% of the high school teachers.
    - The administrative staffing pattern favors the male. Only 1/4 of site administrators (e.g., principals, vice-principals, and administrative assistants) are female, only 4 of whom are principals.
    - In the pupil personnel services, about half of the staff is female.
    - The overwhelming majority of instructional aides, the only classified position involved

in the delivery of basic skills, are women.

- Virtually all instructional aides are Black.
- Blacks are under-represented at the staff level. Only 28% of all Certificated staff are Black, with the highest proportion at the Fourth to Sixth grades (37%).
- The administrative staffing pattern favors Non-Blacks. Only 1/4 of Kindergarten through Third grade administrators are Black, with only 2 of 10 permanent principal positions being held by Blacks. Greatest equity is achieved by Blacks at the secondary administrative level (43%).
- The pupil personnel staff seriously underrepresents Blacks. About 1/4 of the guidance and counseling staff are Black, with only 6 of 30 counselor positions being held by Blacks.
- Three of the four top administrative positions in B.U.S.D. (superintendent and three assistant superintendents) are held by Black males.

SUMMARIZED CONCLUSIONS -- PROCESS STUDY

Organizational Issues Related to Curriculum and Instruction

Attitudes and Expectancies

Basic Skills Curriculum in B.U.S.D.

Instructional Methodology in B.U.S.D.

Early Childhood Education

Adult Education Program

Staffing Patterns

IV. SUMMARIZED CONCLUSIONS - PROCESS STUDY

The Process Study of the B.U.S.D. Evaluation Study produced a large body of descriptive evidence in seven areas: organizational issues, attitudes and expectancies, basic skills curriculum, instructional methodology, the early childhood education program, the adult education program, and staffing patterns. All seven of these topics were derived from the four component areas which Pacific Consultants was contracted to document and describe; i.e., the attitudes and expectancies of parents, teachers, and students in B.U.S.D., the basic skills curriculum, instructional methodology, and staffing patterns.

Because the B.U.S.D. Evaluation had a very comprehensive research scope, it is difficult to simplify and abbreviate its large array of findings. Any effort to do so tends to overgeneralize conclusions or to dilute their proper context. Simplification may also have the effect of de-emphasizing some of the constraints under which data were obtained. Nevertheless, applied educational research is useful only to the extent to which its findings are made known to and understood by all participants in the education system studied. Therefore, for the purpose of rapid assimilation and for the purpose of summarizing, brief statements are presented below for each of the seven topic areas detailed in the section entitled: III. RESULTS AND DISCUSSION - PROCESS STUDY. It is very necessary, however, that the reader consult the full presentation of results, discussion, and conclusions if more than the most superficial understanding is desired.

Organizational Issues Related to Curriculum and Instructional Methodology

In the 1974-1975 academic year, B.U.S.D. was operated under a dual organization system which included both a programmatic and a functional approach.

- Lines of authority and communication within the central office and between the central office and individual sites were poorly defined.
- Delivery of support services was highly dependent upon help from specific individuals at the district level and was provided on an informal and sporadic basis.
- A generally accepted level of antagonism exists between site staff and the central administration.
- Program evaluation suffers from the lack of systematic, nonduplicative, and innovative planning approaches.

Attitudes and Expectancies

The parent survey made a series of inquiries pertaining to parental assessments and expectations for B.U.S.D. services for children and parents.

- A majority of parents from all program and racial groups indicated that the provision of a safe, secure school environment needed increased attention.

- Parents recommended more attention be given to training students in study skills, to preparing students for jobs, and to developing a desire for life-long learning.
- Parents wanted improvement in reading and language arts instruction more than in any subject area, with improvement in social studies rarely being cited as a need.
- Parents of elementary children were more satisfied with the current services than were parents of secondary students.
- Parents of Black students were much less satisfied with current services than were parents of White students.
- Parents of Black students were more concerned about college preparation than were parents of White students.
- Parents of both White and of Black students were concerned about safety and security in the schools, but parents of White students were concerned to a greater extent than either of these groups.
- Parents of White students were more concerned about improving science and creative arts than were those of Black Students.
- Parents were satisfied with the level of services providing for students' physical development, health

and hygiene habits, the support of home and family ideals, opportunities for parent classroom participation, and children's regard for their own cultural background.

The survey of teacher expectancies probed teacher attitudes toward the same services to children and parents as did the Parent Survey.

- A majority of B.U.S.D. teachers felt that more attention should be given to providing a safe, secure school environment.
- Teachers felt either more or much more attention should be given to most of the child-related services.
- A majority of teachers felt that sufficient, if not too much, attention was being given to the parent-related services.
- Teachers recommended improvement for services related to academics, future student outcomes, and the personal and social development of students. Their number one priority was the development of student acceptance of responsibility for their own actions.
- For academic services, teachers recommended attention to language arts and science, rather than social studies or math.
- Early elementary teachers were generally more satisfied than were those of the other grade groupings.

- Fourth to Sixth grade teachers were more concerned than any others about science instruction.

The Student Opinion Poll - Part I elicited expectancy responses from students in grades Four to Six regarding the B.U.S.D. services to students.

- Students were generally satisfied with instructional services.
- Students were concerned about services focusing on college and job preparation and on the development of a desire for life-long learning.
- The majority of students wanted more attention given to a positive academic self image.
- The majority of students urged attention be given to providing a safe, secure school environment, and to providing an enjoyable school experience. Security ranked first and the enjoyable school experience ranked second.
- Junior high students and later elementary students were more concerned about safety than were high school students.
- Students of all racial groupings recommended that more attention be given to bringing about security in their schools.
- Non-ESP students were significantly more concerned about the development of health and hygiene and the provision of safe schools than were ESP students.

- Similar to their teachers, Four to Six students urged improvement of science instruction.

The Student Opinion Poll-Part II asked for reactions to a series of statements about students' instructional setting.

- Both Black and White students were satisfied with the instruction and personal focus provided, as well as the equality of treatment given to various races and to both sexes.
- Both Black and White students were concerned about the physical appearance and furnishings of their schools.
- There was strong recognition among both Black and White students that trouble and violence played a role in their instructional setting.
- Students did not feel that sufficiently interesting field trips and social activities were provided.
- ESP students regarded their instructional setting in a more positive way than did Non-ESP students.
- Tenth through Twelfth grade students were more positive in their assessments of instructional setting factors than were junior high or later elementary students.

The SCAMIN, an inventory of student self concept and motivation for academic accomplishment, indicated that students' feelings of academic motivation tended to exceed their feelings of academic adequacy.

- Motivation was higher at the junior high school than at the high school level.
- Twelfth grade students had the lowest concept and motivation scores of all secondary students.
- ESP high school students obtained higher self concept and motivation scores than their Non-ESP counterparts.
- Black and Asian high school students exceeded White students in both self concept and motivation scores.
- Female high school students obtained higher motivation scores than their male counterparts.

Curriculum in B.U.S.D.

- The Curriculum Planning and Coordination Process - In the 1974-1975 academic year there were no comprehensive curriculum objectives and plans or systematic planning procedures in use at either the district or site level.
  - Curriculum was planned via an informal, decentralized, teacher-determined process.
  - A limited amount of curriculum articulation within or between schools was in evidence.
  - B.U.S.D. students are still subject to *de facto* separation on the basis of achievement.

This is accomplished either by pull-out programs or by providing different teaching methods to different skill groups in the same classroom.

  - The student tracking system is particularly evident at the secondary level, where a child is slotted into a virtually immutable track in the Seventh grade.
  - Principals and district administrators agree that a more systematic, coordinated, and comprehensive curriculum is needed, particularly in basic skill areas.

- Elementary Reading/Language Arts Curriculum - The Teacher Survey - Part III inquired in detail about the curriculum strategies and practices utilized in the elementary reading/language arts programs.
  - There is a heavy emphasis on most reading and language arts skills in the elementary grades.
  - There is some emphasis on skills of dubious value , a fair amount of emphasis on skills at inappropriate grade levels, and some teaching of contradictory skills.

- ● ● Students are exposed to the same skills grade after grade, indicating that teachers do not seem to be aware of which skills have been mastered by students in previous grades.
- ● ● Teachers use a wide variety of reading and language arts materials, including extensive use of teacher-prepared materials, with no particular emphasis on one set of materials or another.
- ● ● There is too much emphasis on teaching Standard English to non-standard English speakers, a practice particularly inappropriate for the primary grades.
- ● ● A skill testing program is needed so that teachers will know which skills students have mastered in previous grades.
- ● ● Teacher involvement in curriculum development and teacher training would enhance the value and implementation process of such changes.

- ● Secondary English/Language Arts Curriculum - A sample of secondary English teachers were interviewed about the B.U.S.D. secondary English and Language arts curriculum content and practices.
  - ● ● The entire language and literature program in the B.U.S.D. would profit from greater coherence and district planning.

  - The secondary English and Language arts program requires an in-depth analysis to determine and coordinate its objectives and strategies.
  - The distinction between grammar and usage is not clearly understood by secondary English teachers. Strategies for teaching usage through the oral mode would be an advantage to the secondary English program.
  - A unified plan of instruction for giving social class dialect speakers the option of using standard English as well as their own dialect should be considered.
  - The use of drama and all literature would contribute to the social sensitivity and development of human relationships of B.U.S.D. students.
  - Plans for individualizing secondary English and language arts curriculum would be an appropriate goal. It requires an innovative approach to including the involvement of busy teachers.

- Elementary Mathematics Curriculum - The Teacher Survey - Part III requested detailed information from elementary teachers about their curriculum and practices.
  - The greatest weak spot in the elementary mathematics program seems to be in the provisions

for Fourth to Sixth grade pupils who perform below grade level.

- An increasing emphasis on skill areas outside computation may be in order for the B.U.S.D. basic skills curriculum. These might include geometry and measurement, functions and graphing, and aspects of practical applications which go beyond the traditional "word problems." Instructional materials would probably be needed in the primary grades.
- The increasing use of physical materials and emphasis on activity approaches to learning would be beneficial to the elementary mathematics program.

- Secondary Mathematics Curriculum - A sample of secondary mathematics teachers were interviewed about the content and approaches used in the secondary mathematics curriculum in B.U.S.D.
  - The top priority need for improvement in the secondary mathematics program is for the low achieving students. Among the alternatives, reducing ability grouping in junior high school and modifying the intermediate school program for below grade level pupils should be considered.

  - The Kindergarten through Twelfth grade mathematics program requires an administrative and supervisory job role. The primary responsibility of the person in such a position would be to coordinate curriculum between feeder and receiver schools, and to establish and maintain communication concerning the mathematics programs at their schools.
  - An improved articulation of the mathematics program is needed, particularly in the intermediate and junior high grades.
  - More mathematics curriculum materials are needed by some teachers, including materials of appropriate readability for low achieving students.
  - An increased incorporation of physical materials into the mathematics curriculum of secondary students would be advantageous to the outcomes of students.
  - The utilization of electronic calculators could serve important educational purposes for some classrooms and students.

- Secondary Science Curriculum - A sample of secondary science teachers were interviewed about the content and curriculum strategies used at the secondary level.

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- Little communication seems to exist between junior and senior high school science staffs.
- No mechanism seems to be currently in operation which would establish communication lines.
- Many students repeat many topics in instruction.
- Science below the senior high school level essentially "doesn't count" since it is virtually ignored by the high school at the same time that the high school offerings are repetitious.
- Skills are not building as much as they might with respect to processes or content of science materials.
- Some individual teachers are frustrated and turning inward as a response to this situation.
- Rationales for carrying out instruction and procedures in science programs were not clearly visible.
- There was a wide variation across grades Seven to Twelve in regard to the accessibility and frequency for using community resources for instruction.
- A greater emphasis on reading, writing, and vocabulary assignments related to the text is used than some science education specialists feel is advisable. The alternative would be

to emphasize active procedures and processes for understanding nature such as observing, classifying, hypothesizing, controlling variables, making predictions, manipulating physical materials, etc.

- - A series of released-time meetings of science teachers could be organized in a manner which would establish lines of communication and lead to constructive, cooperative planning.

- Secondary Social Studies Curriculum - The secondary social studies teachers were sampled for an interview on the curriculum content, offerings, and approaches to social studies in B.U.S.D.
  - The desireability of separate social studies courses for ESP and Non-ESP students should be weighed against the value of having a variety of students in all social studies courses.
  - The social studies program does not feature an articulated skills sequence. Such a sequence might include skills in information gathering, drawing conclusions, making generalizations, and making inferences.
  - Students do not have ample opportunities to express their own opinions and to raise

controversial topics in class. Several approaches are available which would improve students' abilities to carry on meaningful discussions of controversial issues.

- - Although some obstacles exist, B.U.S.D. students would profit from greater opportunities for community involvement relevant to social studies.

Instructional Methodology in B.U.S.D.

- The Instructional Planning and Policy Process - Information on the planning and policy processes in B.U.S.D. for instructional approaches was obtained from interviews with district administrators and the principals or project directors of B.U.S.D. schools.
  - Instructional methodology policies and practices, including teacher utilization, student organization, and individualization, are primarily a function of individual school and teacher decision. The district has very few policies in those areas and to date had exercised almost no control over most site policies.
  - In terms of actual practice, most schools reported using the traditional self-contained

classroom approach, and a few schools reported a limited amount of team teaching.

  - There is no common definition of individualized teaching in B.U.S.D. Before calling for the adoption of individualization as an officially preferred mode of instruction, a specific behavioral definition is needed.

- Classroom Observations of Individualization - Each basic skill classroom in the elementary schools, and one class of each basic skill teacher at the secondary level were observed for the degree of individualization employed and the particular model of instruction in use.
  - The younger B.U.S.D. students experienced more individualized teaching while students at upper grades experienced progressively more traditional styles of teaching. At the high school level, a highly traditional whole-class approach was utilized almost exclusively and the incidence of high individualization was very low.
  - The utilization of individualization was more variable for the special elementary grade combinations.
  - None of the grades or special grade combinations achieved a level of individualized

teaching which would be considered highly individualized.

  - The non-individualized, traditional approach to teaching is the most popular instructional approach in B.U.S.D. The second most popular is the Active, Teacher Directed approach. The latter is typically referred to in B.U.S.D. as the diagnostic-prescriptive approach.
  - The ESP and Non-ESP schools and programs utilized essentially the same degree of individualized teaching.
  - The Non-ESP grade groupings individualized their teaching more at the lower grades and became progressively more traditional in the higher grade groupings.
  - In the ESP grade groupings, the high school grades were less individualized than the elementary grades, yet considerably more individualized than the junior high school grades or the Non-ESP high school grades.

- Teacher Report of Individualization - The final four items of the Teacher Survey-Part II addressed several teaching practices which have relevance to the nature and extent of individualized teaching undertaken in B.U.S.D.

- Individualized practices were most often indicated by all B.U.S.D. teachers in the areas of evaluation instruments, the selection of instructional objectives, the maintenance of records indicative of pupil progress, and diagnostic-prescriptive procedures.
- Half of the B.U.S.D. teachers reported that setting different instructional objectives for individual children was typical. The remaining teachers were equally divided between the practice of setting different objectives for different subgroups or the more non-specific practice of either setting the same objectives for the whole class or simply relying upon general educational goals.
- Somewhat less than half of all B.U.S.D. teachers recorded skill specific progress, a third documented progress on general class objectives, and a quarter recorded only letter grades or their equivalent.
- A majority of B.U.S.D. teachers reported that diagnosing the skills of individuals and/or groups of pupils for the purpose of aiding instructional decisions was typical.

- • • Elementary grade teachers reported the more highly individualized approaches to be typical more often than did secondary teachers.
- • • Work samples and anecdotal reports were utilized more often by elementary than secondary teachers.
- • • Secondary teachers more often reported that evaluation instruments developed in their classes were the typical evaluation tool.
- • • About 1/3 of all teachers reported that the typical method used for evaluating student progress was the standardized or commercially available instruments.
- • • Individual instructional objectives were typically set in a large proportion of classes at both elementary and secondary levels. However, approximately half of the secondary teachers reported the typical use of general educational goals or the same instructional objective for all students in a class.
- • • A majority of elementary grade teachers kept student progress records on either specific skills or general class objectives. Over half of the secondary teachers relied upon letter grades alone and approximately another

third typically kept records pertaining to general class objectives.

● ● The vast majority of all B.U.S.D. teachers, regardless of grade level, reported the diagnosis of student skills for decisions about pupil instruction.

● ● Teachers in ESP and Non-ESP programs did not differ in their reports of the type of evaluation instruments used, the selection of instructional objectives, the maintenance of records indicative of pupil progress, and diagnostic-prescriptive procedures.

● The Open Classroom Approach - Part II of the Teacher Survey asked a series of 28 questions about instructional practices typical of the open classroom approach to instruction. This particular approach represents one of the major types of individualization of instruction.

o o Teaching practices in B.U.S.D. are neither extremely closed nor extremely open, but tend to be more closed than open.

● ● The most open dimensions of schooling in B.U.S.D. consist of student interaction, timing of evaluation, cooperative planning and teaching, criteria for subgrouping, and the development of materials.

● ● The most closed dimensions of schooling in B.U.S.D. consist of time scheduling, the determination of general objectives, the age and ability range in classroom composition, free time, and rule making.

  - There is an inverse relationship between the degree of openness and the grade level.
  - All grade groupings rated student interaction and cooperative planning and teaching as among the most open dimensions of schooling.
  - All grade groupings rated time scheduling, free time, and determination of general objectives as among the most closed dimensions of schooling in B.U.S.D.
  - Secondary mathematics was the most closed of all grade levels while the Kindergarten-Third special combination and the Kindergarten grade level were the most open.
  - ESP teachers were consistently more open in their teaching practices than were Non-ESP teachers.

- Racial Distributions in B.U.S.D. - The racial distributions of the schools and classrooms in B.U.S.D. were examined to ascertain the extent to which the district is achieving its integration goals.
  - The results on racial distributions in the various school sites indicated that there

was variation in the distribution of Black students at the site level. Racial parity was not achieved at 13 or the 24 sites. Even so, it appears that the disproportionate representation of Blacks at elementary schools is a random phenomenon.

  - At least one Kindergarten through Third grade school in each zone had a disproportionately low percentage of Black students. At a minimum, one school in each zone has not been effectively desegregated.
  - At the secondary level tracking occurred by subject area as well as within subjects. Black students are programmed into the remedial track, the decision for which is made at the Seventh grade.

Early Childhood Education Program

Information on the Early Childhood Education (ECE) Program was gathered by interviewing the three supervising teachers and by distributing a questionnaire to ECE teachers.

- There is a feeling among ECE staff that the central administration does not actively support and provide assistance in carrying out ECE's program components.

- ECE staff felt that more effective articulation of curriculum is needed between the ECE program and that of the Kindergarten through Third grade schools.
- Long waiting lists for ECE enrollment spots exist.
- ECE staff were satisfied with their physical sites, the amount of materials and equipment made available to them, and with the staff to pupil ratios.

Adult Education Program

Interviews with program personnel provided the information for describing the Adult School's current status in terms of school objectives, existing programs, accomplishments, and needs.

- The Adult School staff feels a need for additional administrative support, and clerical personnel.
- The provision of child care services for Adult School students continues to be a pressing need.
- The Adult School intends to extend its services to more segments of the population who are in need of adult basic education, vocational training, diploma work, opportunities for creative activities, or personal enrichment.

Staffing Patterns

The staffing patterns in B.U.S.D. reflect problems in implementing advocated affirmative action goals.

- The student to staff ratio in Kindergarten to Third grade schools ranged from 12.33 to 20.16 (including instructional aides).
- The percentage of female teachers is inversely related to grade level, ranging from 94% of the Kindergarten to Third grade teachers to 41% of the high school teachers.
- The administrative staffing pattern favors the male. Only 11 of the 44 site administrators are females, with only 4 holding principalships.
- About half of the pupil personnel positions are held by females.
- The overwhelming majority of instructional aides are Black and female.
- Blacks are under-represented at the staff level. Only 28% of all Certificated staff are Black, with the highest proportion at the Fourth to Sixth grades (37%).
- The administrative staffing pattern favors Non-Blacks. Only 1/4 of Kindergarten through Third grade administrators are Black, with only 2 of 10 permanent principal positions being held by Blacks. Greatest equity is achieved by Blacks at the secondary administrative level (43%).
- The pupil personnel staff seriously underrepresents Blacks. About 1/4 of the guidance and counseling staff are Black, with only 6 of 30 counselor positions

being held by Blacks.

- Three of the four top administrative positions in B.U.S.D (superintendent and three assistant superintendents) are held by Black males.